

# Town of Arlington, MA Redevelopment Board

# Agenda & Meeting Notice January 13, 2025

Per Board Rules and Regulations, public comments will be accepted during the public comment periods designated on the agenda. Written comments may be provided by email to cricker@town.arlington.ma.us by Monday, January 13, 2025, at 3:00 pm. The Board requests that correspondence that includes visual information should be provided by Monday, January 10, 2025, at 10:00 am. Please note that all times are estimates; individual agenda items may occur earlier or later than the time noted.

The Arlington Redevelopment Board will meet Monday, January 13, 2025 at 7:30 PM in the Arlington Community Center, Main Hall, 27 Maple Street, Arlington, MA 02476

#### 1. Organizational Meeting

7:30 pm

Per the Rules and Regulations of the Redevelopment Board, the first Board meeting in January shall begin as an organizational meeting. At that time, the Board shall elect a Chairperson and a Vice Chairperson.

#### 2. Review Meeting Minutes

7:35 pm

The Board will review and vote on meeting minutes from December 14, 2024, and December 16, 2024.

#### 3. Public Hearing: Docket #3834, 30 Mystic Street

7:40 pm The Board will vote to continue the hearing to January 27, 2025.

# 4. Public Hearing: Docket #3821, 1513-1515 and 1517-1519 Massachusetts Avenue (continued from December 2, 2024)

7:45 pm

The public hearing is continued to allow the Board to review and approve the application under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

# 5. Public Hearing: Docket #3798, 821 Massachusetts Ave (continued from October 21, 2024)

8:30 pm

The public hearing is continued to allow the Board to review and approve the application under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

6. Public Hearing: Docket #3348, 821-837 Massachusetts Ave (continued from October 21, 2024)

9:15 pm The public hearing is continued to allow the Board to review and approve

modifications to the previously issued Special Permit under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

### 7. Discussion of 2025 Annual Town Meeting Warrant Articles

9:20 pm The Board will discuss a memo from DPCD regarding proposed warrant

articles to come before Town Meeting.

#### 8. Open Forum

10:00 pm Except in unusual circumstances, any matter presented for the consideration

of the Board shall neither be acted upon, nor a decision made, the night of the presentation. There is a three-minute time limit to present a concern or

request.

#### 9. New Business

10:15 pm

### 10Adjourn

10:30 pm (Estimated)

#### 11.Correspondence

821 Mass Ave:

• W. Evans, 10/25/2024

• R. Sacks, 11/12/2024

### Other:

• C. Wagner, 12/20/2024

• C. Heigham, 1/12/2025



### Town of Arlington, Massachusetts

### **Review Meeting Minutes**

Summary:

7:35 pm The Board will review and vote on meeting minutes from December 14, 2024, and December

16, 2024.

### ATTACHMENTS:

	Type	File Name	Description
D	Meeting Minute (draft)	12142024_DRAFT_Minutes_Redevelopment_Board_Retreat.pdf	12142024 DRAFT Minutes Redevelopment Board Retreat
ם	Meeting Minute (draft)	12162024_DRAFT_Minutes_Redevelopment_Board.pdf	12162024 DRAFT Minutes Redevelopment Board

### Arlington Redevelopment Board Saturday, December 14, 2024, at 10:00 AM Arlington Community Safety Building, 2nd Floor 112 Mystic Street, Arlington, MA Meeting Notes

**PRESENT:** Rachel Zsembery (Chair), Eugene Benson, Shaina Korman-Houston, Kin Lau, Stephen Revilak

**STAFF:** Claire Ricker, Director, Planning and Community Development; Sarah Suarez, Assistant Director of Planning and Community Development

Ms. Zsembery called the meeting to order at 10:00am.

Ms. Zsembery requested an update on DPCD projects from Director Ricker.

Ms. Ricker provided a brief update on major projects the Department has been working on throughout the year including:

Staff worked with Arlington Commission for Arts and Culture (ACAC) to develop Artist Live/Work Guidelines for Artist mixed-use space in Industrial Districts. To be discussed further with Town Counsel regarding their enforceability and the criteria for ACAC's Artist Certification Program.

Ms. Zsembery noted that design guidelines for commercial and residential properties have been referenced in past decisions but not required as a condition of approval.

Staff and its consultant recently conducted a site walk along Park Avenue to identify the first round of safety improvements at the intersections of Paul Revere/Wollaston St., Appleton St., and Oakland St. which will begin in the spring of 2025. Staff is also working with the Town Manager's office to obtain matching grant funds for the Mystic/Minuteman Bikeway connection project and for the redesign of Broadway, and on a traffic calming guide to explore design improvements at crosswalks.

Mr. Revilak stated that Broadway/Warren intersection should be included on the update list and Ms. Ricker stated it's possible it could be a future CDBG project.

Mr. Benson stated rain gardens should be considered at the time of these improvements. Any potential configuration should include rain gardens with water retention, particularly around Mill Brook.

Mr. Lau advised that rain garden projects are often cost prohibitive according to the Town Engineer.

Ms. Ricker advised there was an earmark for green infrastructure improvements that Arlington and 12 other communities were awarded and could potentially be used for projects like that.

Mr. Lau asked about roadway improvements near the Greek church.

Ms. Ricker explained the Town received a \$4 million grant for the redesign, however that only covers half of the cost of the project. Staff is working with its consultant, Stantec, to develop a phasing of the project so the Town can apply for additional funding for the next phase of the project.

Ms. Ricker discussed the ARPA funding for affordable housing and stated that the Arlington Affordable Housing Trust recommended approval of nearly \$3,000,000 in funding to create deed restricted

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affordable housing. Those funds will be used to create at least 11 units initially, with additional rental units being deed-restricted as units turn over and income-qualified tenants move in.

Mr. Benson stated he would like to see better communication between the Town and the MBTA, such as ridership and bus service improvements particularly in terms of extending the T. He also wants to make sure the Town is involved in any proposals to redevelop Alewife Station particularly in terms of where people will park during the garage reconstruction.

Ms. Zsembery advised that the Town Manager submitted a letter to the MBTA to request that Arlington receive stakeholder status and be involved for the duration of the project.

Mr. Benson stated he was happy to hear that and would like to make sure that the project addresses stormwater and combined sewage storage at that time.

Mr. Lau requested staff explore potential improvements/redevelopment at the MBTA bus depot.

Ms. Ricker stated the bus depot was estimated to need \$125,000 in renovations to address lead paint remediation, which appears to have stalled any plans for MBTA to improve the site.

Ms. Korman-Houston asked whether the Town had the right to condemn or issue fines.

Mr. Lau stated he doesn't believe so but it's possible a state inspector could, if requested.

#### **Potential Articles for Town Meeting 2025**

Ms. Ricker updated that the chair of the Zoning Board of Appeals will bring discussion items to the meeting on December 16, including definitions of lot coverage and repeat requests to explore amendments to the parking regulations.

Ms. Zsembery asked if the affordable housing overlay would be presented.

Ms. Ricker stated she was unsure.

Ms. Zsembery requested they update the ARB as soon as possible. She further identified the following topics for discussion:

- Removing homes from the ARB jurisdiction when on the bike way and in residential districts R1 or R2. These should be reviewed by the ZBA.
- Redefine or remove B1 zoning district properties.
- Align ADU bylaws with state legislation.
- Look at the liquor control law; removal of two-drink maximum without ordering food and the 50-seat minimum to all alcohol establishments without food.
- Shared resource for signage and enforcement of vacant storefronts between DPCD and ISD. Mr. Benson noted he saw 5 vacant storefronts within one block that still had signs up.
- Mr. Benson requests Town Counsel review the new economic development bill regarding special permit extensions.
- Artist housing and industrial districts. How do we review and should we modify? Ms. Korman-Houston asked if we had any artist housing now and Ms. Ricker stated she is not aware of any.
- Arlington Heights business district survey to be reworked with a consultant and have ready for spring town meeting in 2026.

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- Mr. Revilak would like to revisit the special permit requirement for renting up to three rooms in residential districts.
- Mr. Revilak would also like to revisit open space requirements. There are more appropriate uses for open space; for example, look at Cambridge's cool zone.
- Mr. Revilak would also like to consider amending the slope requirements for open space as they don't make sense in Arlington's terrain, for example the 149 Pleasant St. project.
- Mr. Benson would like to amend section 5.3. 21.A which discusses the required buffer between residential and commercial districts as there have been discrepancies in interpretation.
- Mr. Benson would like to look at open space comprehensively to rezone cemeteries and will
  check with David Morgan for an update.
- Open space parcels not zoned OS but protected under Article 97 should be zoned open space and may require a definition revision.
- Church lots that are zoned R1 should be considered for rezoning to a more appropriate zoning.
- Mr. Benson discussed marijuana cafes and the new regulation that was adopted. He
  requested Staff look at the bylaw to ensure that Arlington is consistent with state legislation.
   Ms. Ricker suggested that it may require adjusting the distance.
- The ZBA and Conservation Commission should explore whether they will revisit the Inland Wetland District article that did not pass last year.
- Mr. Benson suggested that the Board discuss extending the MBTA overlay district to additional residential districts on Mass Ave in East Arlington, considering that Ms. Ricker had said that rezoning Arlington Heights would not be ready until Town Meeting 2026, which would put off a proposal to rezone Mass Ave in East Arlington to Town Meeting 2027. The Board had mixed support for such an extension.
- Also, need to remove one of the buffer bylaws that is duplicate.

Ms. Korman-Houston agreed with the Board's discussion topics and is particularly interested in the buffer between residential and commercial districts, the MBTA Communities extension, rezoning church properties, open space and cemeteries.

Ms. Zsembery requested the Board reserve 30 minutes to determine what they will actually move forward.

Mr. Revilak asked about the status of Saint Camila's church.

Ms. Ricker stated that an RFP was issued by the archdiocese and a developer selected but she's not sure of the status beyond that. She had heard that it could be supportive housing and possibly a new rectory.

Mr. Benson questioned whether the Dover amendment would allow such supportive housing on the site.

Ms. Korman-Houston stated the archdiocese has put an moratorium on signing any agreements until early 2025 to allow the new Archbishop to be brought up to speed on projects.

Discussion among the Board continued, and the following potential articles were identified for further discussion as to whether to move forward to Town Meeting 2025:

1. Remove homes that abut the bike path from ARB jurisdiction and in residential districts (1 or 2 family homes in R1, R2 districts – to ZBA)

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- 2. Remove B1 districts do these even make any sense anymore?
  - o Two-dimensional changes allow 1.5 and adjust the setback requirements
  - Or do we go with redistricting?
- 3. Align ADU state requirements with Arlington zoning bylaw
- 4. Liquor Control Laws -
  - SB to Review removal of 2 drink max w/out food
  - SB to Review removal of all-alcohol restaurants w/ 50 seat min
- 5. Budget shared resource for signage and vacant storefront enforcement (DPCD/ISD)
- 6. Revisit special permit requirement for renting of up to 3 rooms in residential districts
- 7. Revisit open space requirements comprehensively
- 8. 5.3.21A clarify ARB interpretation
- 9. Open Space
  - o Rezone the cemeteries as cemetery zoning
  - Identify the parcels that are not deemed open space in zoning but are protected by state/federal law and move them to open space
- 10. Church properties zoned R1
  - Rezone them appropriately
- 11. Consider amending original distance restrictions between cannabis locations to allow for more possible locations
  - o Marijuana cafes need to examine rules/consumption on site
- 12. Inland wetland district
  - o ZBA and ConCom to confirm if they intend to pursue again.
- 13. Artist housing guidelines
- 14. Extend MBTA communities to residential on Mass Ave in East Arlington
- 15. Scriveners error Two codes are exactly the same in the bylaw dealing with buffers
- 16. Definition of lot coverage
- 17. Parking regulations comprehensive
  - At least amend TDM sections to deal more with residential and mixed use

Mr. Benson added final comments regarding the Board's EDR application and requested staff include an extra page regarding solar requirements

The meeting was adjourned at 11:57 AM by unanimous vote.

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### Arlington Redevelopment Board Monday, December 16, 2024, at 7:30 PM Community Center, Main Hall 27 Maple Street, Arlington, MA 02476 Meeting Minutes

This meeting was recorded by ACMi.

PRESENT: Rachel Zsembery (Chair), Eugene Benson, Shaina Korman-Houston, Kin Lau, Stephen Revilak

**STAFF:** Claire Ricker, Director of Planning and Community Development; Sarah Suarez, Assistant Director of Planning and Community Development

The Chair called the meeting of the Board to order.

The Chair opened with Agenda Item 1 – Review Meeting Minutes.

December 2, 2024, minutes – The Board members made no changes to the draft minutes. The Chair requested a motion to approve the minutes as submitted. Mr. Lau so moved, Mr. Benson seconded, and the Board voted unanimously in favor.

The Chair moved to **Agenda Item 2 – 2025 Warrant Articles.** 

Ms. Ricker said that she has spoken with Christian Klein, Chair of the Zoning Board of Appeals (ZBA) about amendments to the Zoning Bylaw (ZLB) that the ZBA would like to bring to Town Meeting, as well as one resident who is interested in having his property rezoned to be a part of the Neighborhood Multi-Family Housing Overlay District. The Town has also done some outreach to let members of the community know that they can bring ideas for warrant articles to this meeting.

#### **Zoning Board of Appeals**

The Chair introduced Mr. Klein, who explained that the ZBA has a few proposals for amendments to the zoning bylaw.

- 1. Mr. Klein said that first proposed amendment has to do with the difference between "Building Coverage" and "Lot Coverage." The term "Building Coverage" is defined in Section 2 of the ZBL and is used only once, in the definition of the Vehicular Oriented Business District. The term "Lot Coverage" is used multiple times in the ZBL, but it is never defined. The ZBA has been using the terms more or less interchangeably, using the definition of "Building Coverage." The main way that the two terms might differ is if driveways could be considered part of lot coverage but not building coverage.
  - The Chair said that the Board would be willing to review the warrant article language regarding this change once it has been put together.
- 2. Mr. Klein said that last year, the ZBA asked the Redevelopment Board to consider overhauling the section of the ZBL on parking in residential districts. The second paragraph of that section, 6.1.10.A, relates to second driveways being allowed by Special Permit. In order to allow a second driveway, the ZBA is required to make three findings: that it avoids undue concentration of population, that it allows for adequate provision of transportation, and that it conserves the value of land and buildings in the vicinity. The ZBA does not think those criteria are helpful in terms of making decisions about second driveways. The first two findings are not particularly relevant, and the third one is nebulous. They would like to have a better sense as to what really qualifies as a reason for having a second driveway. Second driveways most often come before the ZBA in projects that are currently two-family dwellings being converted to condominiums by a developer.

Mr. Revilak said that he thinks that traffic circulation and safety is the most important consideration, and it would be good to have that better reflected in the bylaw.

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Mr. Benson asked if the ZBA usually allows a second driveway when the issue comes before them. Mr. Klein said that they allow it approximately two-thirds of the time. When they deny it, it is usually because of limited space on the property, because it is too close to an intersection, or because of concerns about safety on the street. The ZBA can handle questions about the property itself, but they would appreciate input from the Transportation Planner on how to handle the interface with pedestrian walkways and roadways.

The Chair asked Mr. Klein to provide the Board with proposed language for both these amendments.

- 3. Mr. Klein said that Town Meeting passed artist live/work regulations a few years ago, and he understands that the Arlington Commission for Arts and Culture (ACAC) has created criteria about how to qualify for an artist live/work space. He has not seen any documentation to that effect, and he would like to see it made publicly available.
- 4. Mr. Klein said that he knows that the Board is already working on updating the ZBL requirements for Accessory Dwelling Units (ADUs). Mr. Revilak said there a few issues need to be addressed to bring the ZBL into compliance with state law regarding ADUs.
  - In Section 5.10.2.C.(1), the owner is required to submit an affidavit saying that the owner will occupy the ADU or the primary structure at the time the Certificate of Occupancy is issued, but that is no longer allowable under state law. In addition, Section 5.10.2.C.(2) has an exception to the residency requirement, which would be rendered moot if the residency requirement itself were eliminated.
  - The state regulations refer to protected use ADUs, which essentially means the first ADU on a parcel, and say that a special permit shall be required for ADUs that are not protected use ADUs. So the ZBL will need to be updated to reflect that distinction.
  - The ZBL currently requires a special permit for an ADU within 6 feet of a lot line. The state does not allow municipalities to require special permits for ADUs, so that requirement will need to be updated. One ZBA member suggested changing the ZBL so that what is currently allowed by special permit will be allowed by right. Another possibility is to incorporate the requirements for garages in Section 5.4.2.C.(7) into the section regarding ADUs. Mr. Klein said that if the special permit provision were removed, the ZBL could allow ADUs to be built up to the property line, or it could not allow ADUs within six feet of the property line under any circumstances. The problem with the latter option is that an existing garage within six feet of the property line could not be converted to an ADU, as it now can with a special permit. Mr. Lau noted that the Building Code also has limitations on what types of garages can be built within six feet of the property line, which would have to be addressed as well. Mr. Benson said that he thinks that special permits are not entirely disallowed by the state, but they would have to be in line with when special permits are required for other types of structures.
- 5. The Chair said that the Redevelopment Board has also raised the issue of amending the ZBL such that single- and two-family homes in the R1 and R2 districts abutting the Minuteman Bikeway, which currently have to go before the Redevelopment Board for any alterations or redevelopment, would instead go before the ZBA. She asked Mr. Klein if he would agree that it would make more sense for that type of application to go before the ZBA. Mr. Klein agreed and said that he sees no reason for such projects to go through the Environmental Design Review process before the Redevelopment Board.

#### **Shade Trees**

The Chair asked Susan Stamps to address the Board regarding a proposal for a modification to Section 6.3, related to public shade trees. Ms. Stamps said that last year, Town Meeting passed a warrant article requiring developers to plant a street tree every 25 feet in front of a development, either in the tree strip, if possible, or in a tree well in the sidewalk. The Tree Committee realized that the bylaw does not address the situation in which there is neither a tree strip nor a sidewalk, or if the tree strip is too compromised to support a tree, or if the sidewalk is too narrow to have a tree and still allow people to walk by. The state public shade tree law, Chapter 87 of Mass General Laws, allows planting of a public tree by the Tree Warden on private property, within 20 feet of the public way. The Tree Committee, the Tree Warden, and the Department of Public Works are currently working on a program for this type of planting, including a contract with the property owner and determining what sort of protections will be in place. They would like to have this requirement reflected in the ZBL.

Mr. Benson said that the section of the ZBL relating to street trees actually does address this issue. Section 6.3.4.E says, "Where there is no other suitable location within the public way, shade trees may be proposed in locations within the lot, or in exceptional circumstances the Arlington Redevelopment Board or Zoning Board of Appeals, as applicable, may allow the owner to make a financial contribution to the Arlington Tree Fund." This was included in order to take into account developments built right up to the lot line. He does not think that an additional amendment is required.

Mr. Benson also noted that Section 6.3 applies to residential development as well as to commercial development, but he thinks that new single- and two-family homes are being built without street trees being planted as required. He does not know if the Inspectional Services Department should be enforcing that, or if that's something the Tree Committee can follow up on.

Mr. Revilak noted that in order for the Tree Warden to plant a tree on private property, they do need the owner's permission. He asked what would happen if such a tree were to become diseased at some point in the future, and if the owner would need to have a tree hearing before the Select Board in order to take it down. Ms. Stamps replied that in their discussion of the issue the Tree Committee decided that once a tree is planted on private property, it would not make sense for the Town to continue to claim jurisdiction over the tree, and the property owner would be able to make decisions about it.

Ms. Korman-Houston said that she would like to see examples of communities that have tried this sort of zoning. She also asked if this would be part of a landscaping plan for a development, even if the tree itself was provided by the Town. That would potentially reduce the benefit to the Town. Ms. Stamps replied that that would be up to the Board as it evaluated a landscaping plan as part of a project.

Mr. Lau said that such an amendment would have to consider the required setbacks. He would not want to see the requirement for a tree to be put on private property be a barrier to development in areas with limited setbacks. In some districts, the Board is trying to encourage developers to build close to the sidewalk in order to engage the streetscape, and requiring trees to be planted between the sidewalk and the building could be a hindrance to that. He is also concerned about requiring trees to be planted on private property but then making them the property of the owner. The owner could decide to cut the trees down, or a tree could fall and cause damage which the owner would be responsible for.

The Chair said that she agrees with Mr. Benson that this issue is already covered in the ZBL, and she does not want to create a situation in which there is little to no required setback, but tree planting is required, and the Board then needs to issue relief of some sort. The ZBL already enables developers to donate to the Arlington Tree Fund for the purpose of planting trees elsewhere if they are unable to plant street trees.

#### **Teardown Moratorium**

Karen Samuelson, 18 Tower Road – she is concerned about lack of housing that is affordable for anyone who is young or who wants to downsize. Huge houses are being built to the limits allowed on the lot, making them large and unaffordable for many people. She would like to find a way to preserve smaller homes so that they are not torn down in order to build something much larger on the same lot. Extremely large houses reduce privacy and limit views for neighbors. She said that Winchester has a moratorium on teardowns. Such a moratorium was proposed a few years ago in Arlington and did not pass, but more and more people are being affected by this issue, and she would like it reconsidered.

Mr. Lau said that a moratorium on tearing down old houses would effectively limit supply, which would actually increase prices. He also noted that older homes are not as efficient as newer homes. Increasing density also reduces the need for cars. Those are issues that would need to be considered.

Ms. Korman-Houston said that what happened in Winchester was not a complete moratorium on teardowns; they strengthened the review process for teardowns and modifications of historic homes. The process allows for a thoughtful review process that looks at each property individually rather than a one-size-fits-all approach.

Mr. Benson acknowledged that many older homes have been replaced with larger, more expensive homes. He reiterated what Mr. Lau said about energy efficiency; new homes built now must meet detailed and strict standards on

energy efficiency and must be fossil-fuel free, so a much larger new home is often more energy efficient than a smaller, older home. He also said that state zoning law does not allow municipalities to limit the size of a single-family home. He also noted that a moratorium must be for a limited amount of time and must include specific goals; the Town cannot pass an indefinite moratorium on teardowns that does not seek to accomplish a particular outcome. One option to limit house size would be to advocate for larger setbacks, which would reduce the allowable footprint. Another would be to advocate for a lower height limit; the RO, R1, and R2 districts currently allow for 2 ½ stories, which often look like 3 stories, and a limit of 2 stories could decrease the overall size of new buildings. One problem with that approach is that it would make many current single- and two-family homes non-conforming, which would make it difficult for owners to make any changes. In terms of the issue of expense, one option would be to allow more homes on the same parcel; if a developer could build two homes on the same parcel where only one is currently allowed, they would be incentivized to build two less expensive homes rather than build one house as large as possible in order to sell it for as much as possible. All these options come with unintended consequences.

Mr. Revilak said that Ms. Samuelson needs to consider the definition of a teardown. Would she want the moratorium to apply to cases in which a new home is built in the same footprint as the one torn down? In such cases the new home is generally more expensive, but not larger. He said that it would be useful if she could provide examples of places where a moratorium was enacted, and what the short- and long-term consequences were. Another issue to consider is the financial impact on sellers who want to sell during the moratorium. The reality is that single-family homes in Arlington are expensive; even small, older houses routinely sell for at least \$800,000, and a moratorium on teardowns would not change the land value. Event vacant lots sell for at least \$750,000. One option would be to reduce lot sizes.

#### 17 Palmer Street rezoning

John Heraty, owner of 17 Palmer Street – He would like his property to be rezoned to be in the Neighborhood Multi-Family Housing (NMF) Overlay District. The NMF Overlay District includes the property next to his. 17 Palmer Street is a three-family home, with a 45-foot clearance on the side of the property between the building and the property line. He has contacted an architect about what could be built on the lot if it were part of the NMF Overlay District, to fulfill the stated goal of the Town to increase housing units. The architect said that he could conceivably add three additional housing units without tearing down the building currently in place. Ms. Ricker shared a map showing the location of the property.

The Chair said that the Board would like to know the underlying zoning of the property. They would also need to go back and look at the decision-making process as to why it was originally excluded from the NMF.

Mr. Revilak said that overall, he thinks the proposal makes sense, but he agrees with the Chair that the Board would need to revisit the original decision-making process. One procedural issue is the requirements for map changes in Section 1.5, including the requirement that Mr. Heraty notify the abutters. That process can take some time, so he should contact DPCD to determine exactly what is required and the time-frame for notifications.

Mr. Benson agreed that adding a property already adjacent to the NMF district makes sense, and he also encouraged Mr. Heraty to contact DPCD about the notification requirements.

Mr. Lau asked if the type of building he is considering could be done through a variance or a special permit, rather than changing the zoning. Mr. Heraty said that his building is already non-conforming, so those options are not available to him.

The Chair moved to Agenda Item 3 – Open Forum.

The Chair opened the floor to public comment.

• David Brecht, 55 Norfolk Road – He wants to understand more about the Affordable Housing Overlay District process. The Chair said that the group working on the Affordable Housing Overlay District is not a committee of the Board, so they are not reporting to the Board. Any citizen or citizen group may present a warrant article; if it is related to zoning, it must have a hearing before the Board. At that point, the Board will hear from the article's proponents as well as public comment, and they will deliberate and vote on whether to recommend action or no action to Town Meeting. So a warrant article does not have to get the approval of the Board in or the Board in the Boa

Town Meeting. The Board encourages people who wish to amend the ZBL to work together with the Board to craft an article that the Board is willing to support. Mr. Benson said that it is important to understand the distinction between the warrant article and the main motion. A warrant article is generally brief; a warrant article for an Affordable Housing Overlay District might be as short as "to establish an affordable housing overlay in the Town of Arlington." A warrant article can be filed without the Board ever seeing it. After filing a warrant article, the proponents have to write the main motion, indicating exactly how the ZBL would be amended. At the hearing before the Board, the main motion language is discussed, and can be changed, and the Board ultimately votes on whether to recommend the warrant article based on the details of the main motion. The Chair explained that the hearings will be publicly noticed, indicating which warrant articles will be heard at which meetings, and when the deliberations and vote will take place.

- Karen Samuelson, 18 Tower Road She also asked for clarification about the Affordable Housing Overlay District. She had assumed that the Board or another Town body was working on the overlay, and she wanted to clarify what she heard tonight, that it is actually a group of private citizens. The Chair said that that was correct. Ms. Samuelson also asked if after a public hearing, the Board decides whether a warrant article can go to Town Meeting or not. Mr. Benson replied that any warrant article filed with the Town will go to Town Meeting; the Board votes on whether or not to recommend it. The Chair explained that anyone can submit a warrant article. If it affects the ZBL, the Board uses their expertise and knowledge of the ZBL and their knowledge of the goals of the Town to make a determination as to whether the proposed change aligns with the goals of the Town and is in the interests of the Town. The Board then makes a recommendation to Town Meeting, but it is ultimately up to Town Meeting, and they may choose not to take the Board's recommendation. The Chair said that a document explaining the warrant article process is posted on the Board's website, and she requested that DPCD staff include the document as part of this meeting's minutes. Ms. Samuelson asked who the group of citizens working on the Affordable Housing Overlay District are and why they are making such a significant proposal for the Town if they are not actually a Town body. The Chair said that they are composed of Arlington residents who are affordable housing professionals and experts interested in developing more affordable housing. They are looking at precedents in other communities and intend to submit a warrant article for a proposed overlay, which will have a hearing before the Board. Until the Board sees the article, they do not have any specific information about it.
- Carl Wagner, 33 Edgehill Road, Precinct 15 Town Meeting Member It is difficult to hear Board members in the room, and he would like the Board to get a better sound system. He would also like the Board to hold hybrid meetings, as the Select Board has been doing. At the Board retreat, the Board discussed the possibility of extending the MBTA Density Overlay to cover East Arlington, because it looks like business rezoning for East Arlington will not happen in the next couple of years. He asked if the Board will extend the density overlay to thousands of people in East Arlington without a working group. If they do, he asked if they would consider reducing the height and size of the existing density overlay to allow more parking, more green space, and more trees. The Chair said that the Board has requested multiple times that the HVAC issues in the meeting room, which cause much of the difficulty with sound, to be addressed, as well as getting better speakers. The meeting space that the Board has been given is not set up to allow for hybrid meetings. A task force was established by Town Meeting to study the pros and cons of hybrid versus in-person versus fully remote meetings. The study concluded that certain types of meetings are most productive as in-person meetings, and that certain spaces are appropriate for hybrid meetings while others are not. The Redevelopment Board was identified as being more productive in-person, and the main room of the Community Center, where they typically meet, was identified as not an appropriate space for hybrid meetings. The Chair also said that during the retreat, the Board discussed several potential warrant articles, many of which require much more discussion than is possible between now and Town Meeting. The Board has not yet identified which potential warrant articles they will be moving forward to Town Meeting; they intend to do so during January.
- Mark Rosenthal, 62 Walnut Street He disagrees with the task force's conclusion that hybrid meetings are not
  needed for the Board, and he would like to know who to contact to get that decision reconsidered. The Chair
  said that she was a member of that committee, and the results are part of the record of 2022 Annual Town
  Meeting. She said that the Board is responsible for setting its own meeting schedule and location, and they have

determined that they will continue to meet in person. They made that decision based on the technology available, the work that they do, and the staff requirements to run a successful hybrid meeting.

The Chair moved to Agenda Item 4 – New Business.

The Board had no new business to discuss.

The Chair asked for a motion to adjourn. Mr. Lau so moved, and Mr. Benson seconded. The Board voted and approved unanimously.

Meeting **Adjourned** at 9:00 pm.

#### **Documents used:**

Agenda Item 1 Draft Minutes – December 2, 2024

Agenda Item 2 2025 ARB Town Meeting Process (available below)

17 Palmer St maps

Agenda Item 6 Correspondence re: ZBL Amendment - 12162027 Stamps, S.

### TOWN OF ARLINGTON



# DEPARTMENT OF PLANNING and COMMUNITY DEVELOPMENT

TOWN HALL, 730 MASSACHUSETTS AVENUE ARLINGTON, MASSACHUSETTS 02476 TELEPHONE 781-316-3090

### Redevelopment Board Review Process and Schedule for 2025 Annual Town Meeting

Date	Process	Description and Action Items
November 2024 – January 2025 <sup>1</sup>	Submission of ideas for zoning amendments	Preliminary ideas for warrant articles may be submitted to the ARB. <sup>2</sup> DPCD staff will schedule time for discussion with the ARB at a hearing in November or December.  Petitioner Action Item: Share ideas for citizen petitions with DPCD Director, Claire Ricker ( <a href="mailto:cricker@town.arlington.ma.us">cricker@town.arlington.ma.us</a> ) to be scheduled for a discussion period at an ARB hearing.
December 2024 – January 2025	Preliminary discussions with ARB	At its December and January meetings, the ARB will be available for previously scheduled preliminary discussions with petitioners. The purpose of these discussions is to discuss the petitioners' intent for the warrant articles, and to provide recommendations and guidance in advance of the close of the Town Meeting warrant.
		<b>ARB Action Item:</b> Review preliminary information submitted by authors of potential warrant articles, provide guidance on next steps.
		<b>Petitioner Action Item:</b> Prepare brief presentation or discussion notes on intent of warrant article.

<sup>&</sup>lt;sup>1</sup> These steps are not required under the public filing process requirements, but it is recommended to ensure that submissions meet legal requirements and are suitably crafted for consideration by Town Meeting.

<sup>&</sup>lt;sup>2</sup> Petitioners may include the following under M.G.L. c.40A: the Redevelopment Board, Select Board, Zoning Board of Appeals, an individual owning land to be affected by change or adoption, registered voters of a town pursuant to section ten of chapter thirty-nine, or a regional planning agency (Metropolitan Area Planning Council).

Date	Process	Description and Action Items	
December 5, 2024 – January 31, 2025 (65 days before	Warrant Opens and Closes	The Town Meeting warrant will open December 5, 2024, and remain open until noon on January 31, 2025. The Select Board establishes the final date for submission of articles to the Town Meeting warrant.	
Town Meeting)		ARB Action Item: The ARB will submit any zoning articles to the warrant.	
		Petitioner Action Item: Members of the public will submit any zoning articles to the warrant. The ARB recommends that petitioners reach out to the Director and Assistant Director for Planning and Community Development to discuss their article and to learn more about the review timeline. The Planning and Community Development staff is available to provide technical assistance to petitioners throughout the process.	
		<b>General Public Action Item:</b> This is the due date for topics (articles on zoning or other topics) to be submitted to warrant for consideration by Town Meeting beginning on April 28, 2025.	
February 6, 2025, February 13, 2025 (+14 days after warrant closes)	Legal Notice Published/ Zoning Warrant Articles Posted	As required by M.G.L. Chapter 40A, The Zoning Act, a legal notice will be placed in a local newspaper that identifies the hearing dates, location, and the topics. At the same time, a document will be published that compiles all of the zoning warrant articles and amendment text (known as a main motion) if available.	
		<b>ARB Action Item:</b> On behalf of the ARB, DPCD staff submits the legal notice and the compiled zoning warrant articles. Additionally, the DPCD staff will communicate the hearing schedule to all petitioners and other interested parties.	
		<b>Petitioner Action Item:</b> At this time, it is important for petitioners to be in touch with DPCD Director and Assistant Director to review the amendment text (main motion) and other relative resources and documents. The DPCD staff is available for technical assistance to any petitioner.	
		<b>General Public Action Item:</b> Once the legal notice is published, the hearing schedule will be published. If you are interested in any of the zoning topics, you can save the date to attend a public hearing with the ARB.	

Date	Process	Description and Action Items
Potential dates: February 24, 2025,	ARB Public Hearings	M.G.L. Chapter 40A requires that the ARB hold public hearings to obtain feedback on all of the zoning warrant articles proceeding to Town Meeting.
March 10, 2025, March 24, 2025 (first hearing + 14 days after legal notice published)		ARB Action Item: The ARB will hold public hearings on Mondays in February and March to obtain feedback. The number and dates of hearings will depend on the total number of zoning amendments to be reviewed. On behalf of the ARB, the DPCD Director and Assistant Director will communicate the hearing schedule and protocol to all petitioners and coordinate obtaining materials from petitioners for inclusion in the ARB's meeting packet which is publically accessible.
		<b>Petitioner Action Item:</b> At least a week in advance of a petitioner's hearing date, petitioners should provide to the DPCD Director and Assistant Director your amendment text (main motion) and other relevant materials. The petitioner should prepare to make a short presentation (no more than 3-5 minutes) at the public hearing and answer questions from the ARB members regarding the petition.
		General Public Action Item: All public hearings are open for attendance by the general public. You may join and provide feedback based on the information presented or just listen. Written comments are also welcome. All materials will be posted online at <a href="mailto:arringtonma.gov/arb">arringtonma.gov/arb</a> .
Proposed dates: April 7, 2025, April 14, 2025	dates:  ARB Deliberates and Votes on Zoning Articles and Votes on Report to Town Meeting  Meeting  Meeting  ARB A each a and votes on Petitic Direct	M.G.L. Chapter 40A requires that the ARB vote on each article and prepare a report for Town Meeting. The ARB can vote to recommend action or recommend no action to Town Meeting. The Report to Town Meeting, which outlines the votes taken and why, is drafted and voted on at the final ARB meeting. The Report is provided to Town Meeting Members and posted online on the Town Meeting webpage.
		ARB Action Item: After hearing from all petitioners and interested parties, the ARB will vote on each article and outline their reasons for each vote. The Report to Town Meeting will be finalized and voted on and submitted to Town Meeting Members and posted online for review.
		Petitioner Action Item: Prior to the ARB's vote, each Petitioner should work with the DPCD Director and Assistant Director to finalize their amendment text (main motion) for consideration by the ARB. Any other relevant information should be provided by the petitioner.
		<b>General Public Action Item:</b> At this stage, all feedback has been obtained by the ARB either verbally or written, the public hearing has closed, and the ARB will vote on each article individually.

Date	Process	Description and Action Items	
March and April 2025	Public Information Sessions	Arlington Town Meeting Members will hold precinct meetings in March and April 2025 prior to the start of Town Meeting. Additionally, the ARB may hold public information sessions on the zoning warrant articles.	
		<b>ARB Action Item:</b> On behalf of the ARB, DPCD Staff and ARB members may hold virtual or inperson public information session(s) to provide an overview the zoning articles to be considered by Town Meeting. The public information session will include time for questions and answers.	
		<b>Petitioner Action Item:</b> Petitioners may want to attend the precinct meetings and ARB public information sessions to provide information about their zoning warrant articles.	
		General Public Action Item: Attendance at the precinct meetings and at public information sessions will provide a venue to seek additional information and to let your Town Meeting Members know your opinion on any article.	
April 28, 2025	Town Meeting Begins on April 28, 2025, and continues on Mondays and Wednesdays un completed. The Town Meeting Members will vote on each article. In most cases, zoning require an affirmative vote of two-thirds majority of Town Meeting.		
		<b>ARB Action Item:</b> The ARB Chair will provide a presentation of the warrant article. DPCD staff may be on hand to provide additional information to respond to Town Meeting Member questions.	
		<b>Petitioner Action Item:</b> If the petitioner is not the ARB, the petitioner will be given a chance to present and answer any questions from Town Meeting Members.	
		<b>General Public Action Item:</b> The general public can watch the Town Meeting proceedings through ACMi.	
Post Town Meeting	Submission to the Attorney General	Towns are required to submit to the Attorney General's Municipal Law Unit information about zoning articles, the process, and the votes taken. Unless otherwise described in the article, the effective date of a zoning amendment is the date Town Meeting voted.	
		ARB Action Item: On behalf of the ARB, the DPCD staff work with the Town Clerk and Town Counsel to prepare and submit the appropriate forms and update the Zoning Bylaw.	
		There are no action items for Petitioners and the General Public.	

If you have any questions about this timeline and process, please contact Sarah Suarez, Assistant Director, Department of Planning and Community Development at 781-316-3096 or <a href="mailto:ssuarez@town.arlington.ma.us">ssuarez@town.arlington.ma.us</a>.



### Town of Arlington, Massachusetts

Public Hearing: Docket #3821, 1513-1515 and 1517-1519 Massachusetts Avenue (continued from December 2, 2024)

### Summary:

7:45 pm

The public hearing is continued to allow the Board to review and approve the application under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

#### ATTACHMENTS:

	Type	File Name	Description
ם	Application for Special Permit	1513-1519_Mass_Ave _PlansDrawings.pdf	1513-1519 Mass Ave - Plans & Drawings
D	Application for Special Permit	1513-1519_Mass_AveCover_Letter.pdf	1513-1519 Mass Ave - Cover Letter
ם	Application for Special Permit	1513-1519_Mass_Ave _Proposed_Plot_Plan.pdf	1513-1519 Mass Ave - Proposed Plot Plan
D	Application for Special Permit	1513-1519_Mass_Ave _LEED_Checklist.pdf	1513-1519 Mass Ave - LEED Checklist
D	Application for Special Permit	1513-1519_Mass_AveLighting.pdf	1513-1519 Mass Ave - Lighting
D	Application for Special Permit	1513-1519_Mass_AveSolar.pdf	1513-1519 Mass Ave - Solar
D	Application for Special Permit	1513-1519_Mass_AveO_M_PLAN.pdf	1513-1519 Mass Ave - Operations & Maintenance Plan
D	Application for Special Permit	1513-1519_Mass_Ave _Civil_Engineering_Narrative.pdf	1513-1519 Mass Ave - Civil Engineering Narrative
D	Application for Special Permit	1513-1519_Mass_Ave _Stormwater_Report.pdf	1513-1519 Mass Ave - Stormwater Report
D	Application for Special Permit	2025-01-07_Updated_EDR_memo1513- 1519_Mass_Ave.pdf	2025-01-07 Updated EDR memo - 1513- 1519 Mass Ave

# **1513 MASS AVE**

# Arlington, MA, 02476

ARB EDR APPLICATION

## Summary

2 stories 5 residential units (5x 2 Bed Units) 1 Commercial unit 5 Arlington parking spaces 8 Bike spaces 0.74 FAR RISE REALTY 1515 APARTMENTS RiseRealty

# **EXISITING CONDITIONS (VIEWS FROM MASS AVE)**



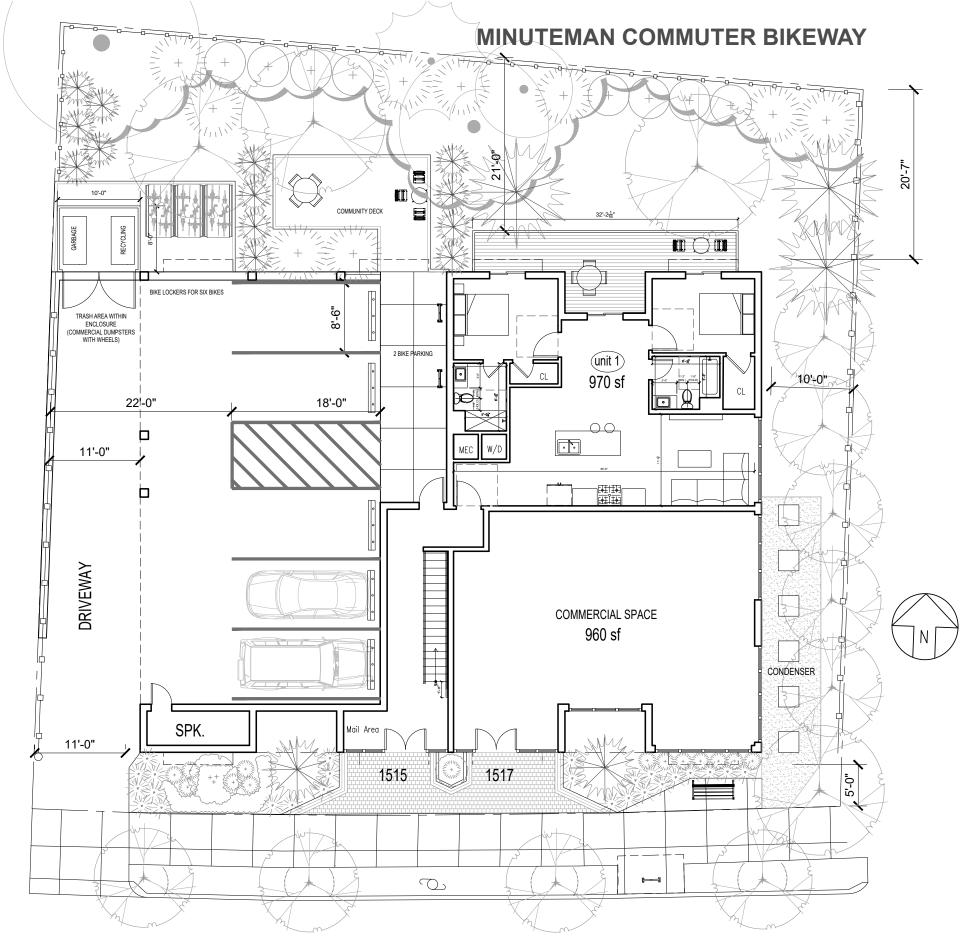








## **SITE PLAN**

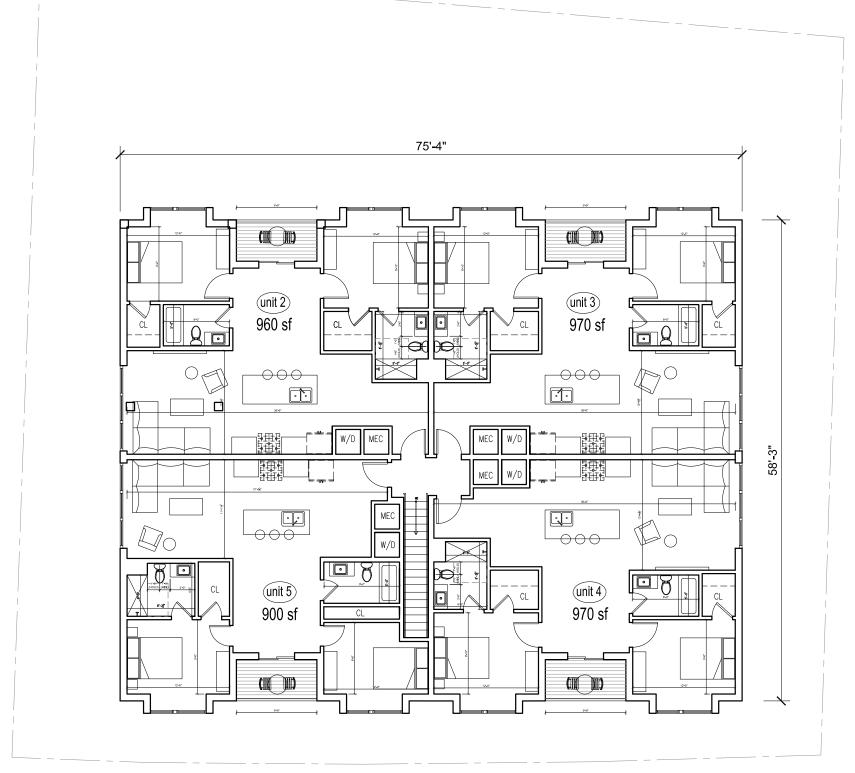




MASSACHUSETTS AVENUE

## **LEVEL 2 PLAN**

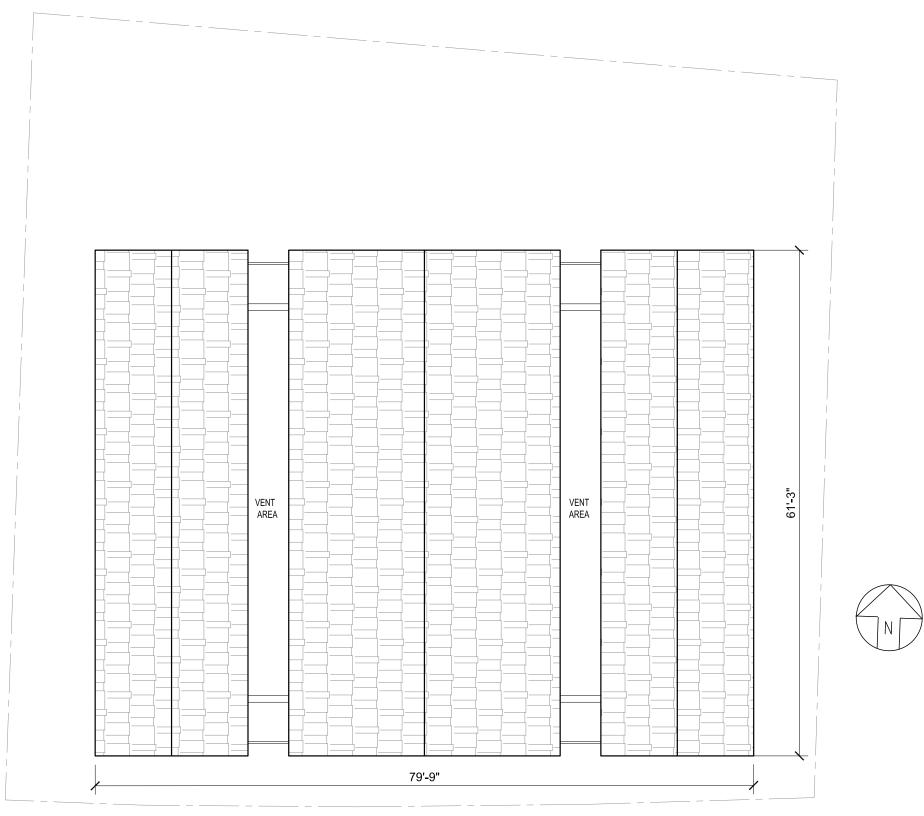
## MINUTEMAN COMMUTER BIKEWAY







### **MINUTEMAN COMMUTER BIKEWAY**







# **ELEVATIONS**



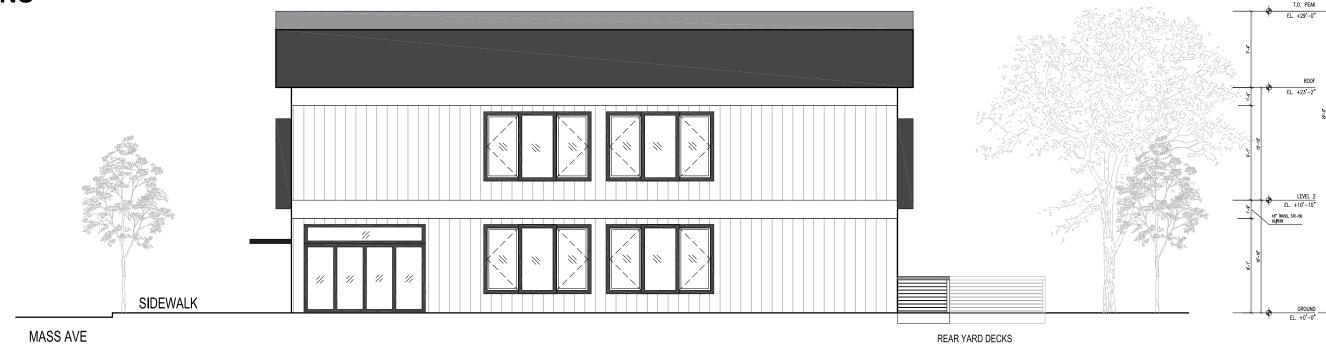
### PROPOSED FRONT ELEVATION



### PROPOSED REAR ELEVATION



# **ELEVATIONS**



### PROPOSED RIGHT SIDE ELEVATION

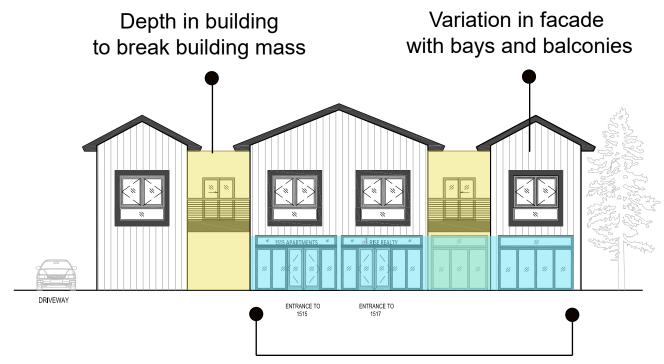


### PROPOSED LEFT SIDE ELEVATION

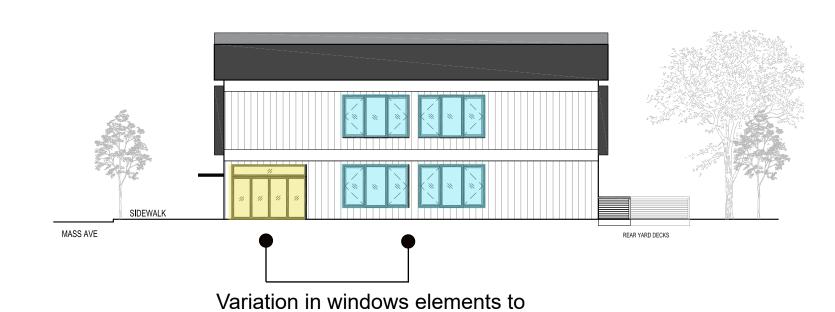
## **FACADE DESIGN**



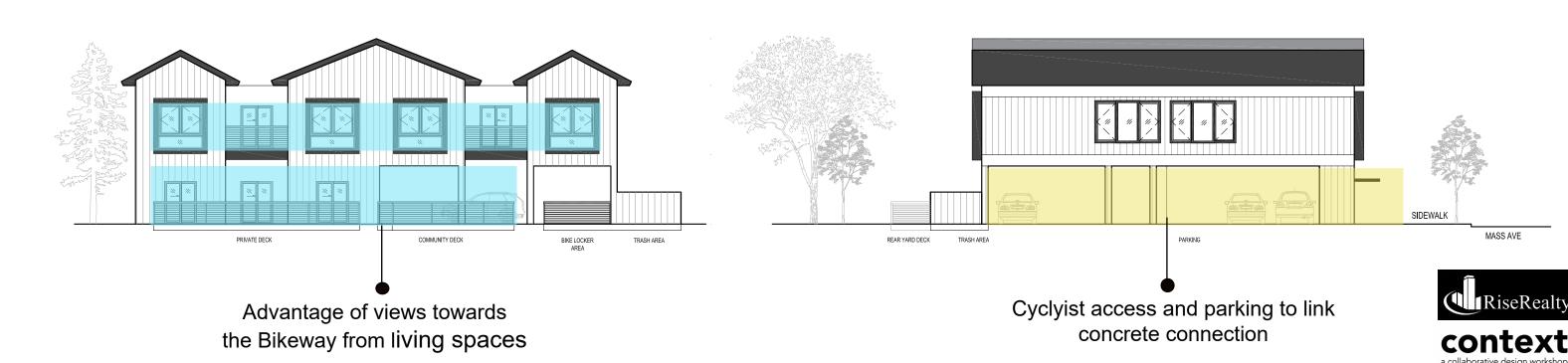
### **FACADE CHARACTERISTICS**



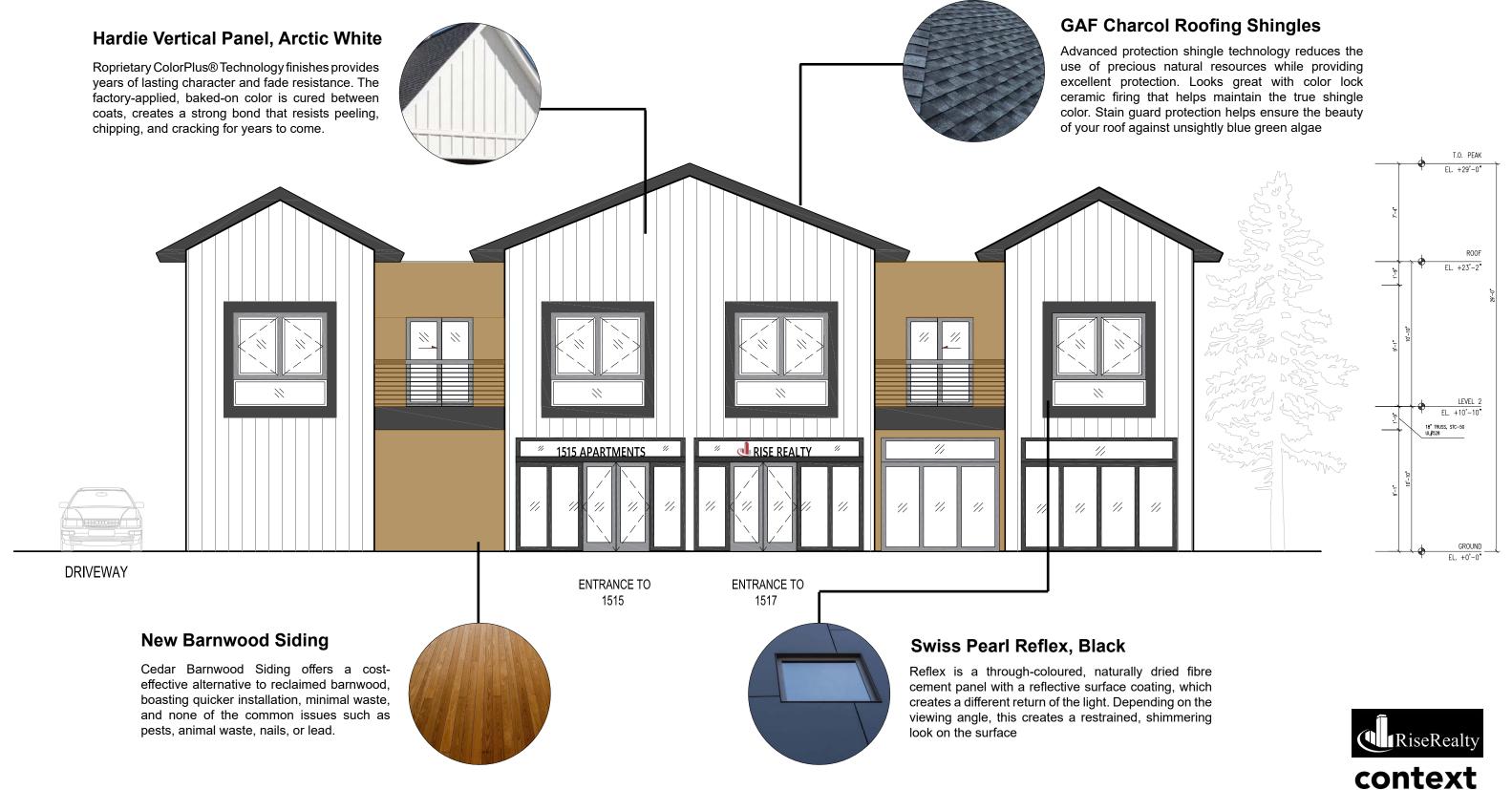
Ground floor transparency and contrast between commercial and residential



create hierarchy in building facade

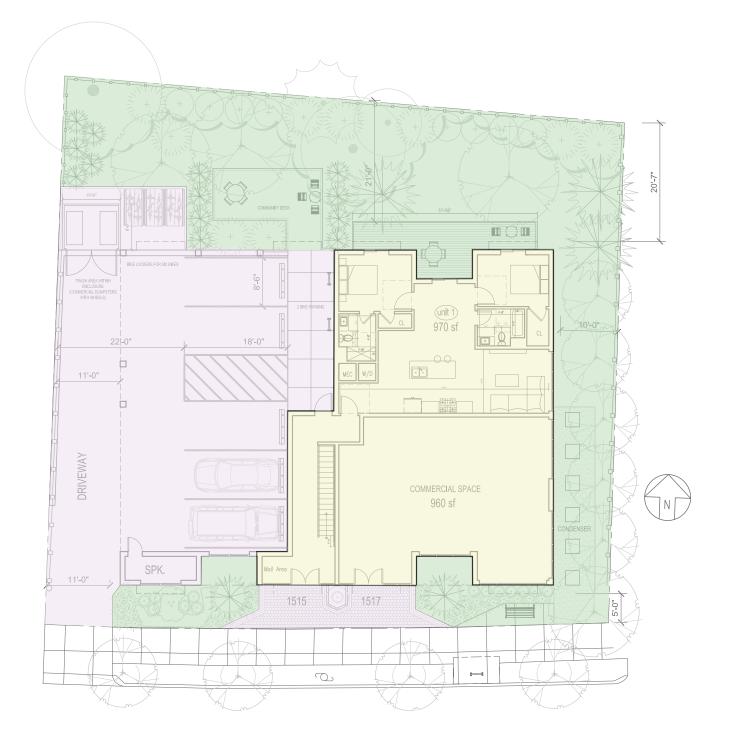


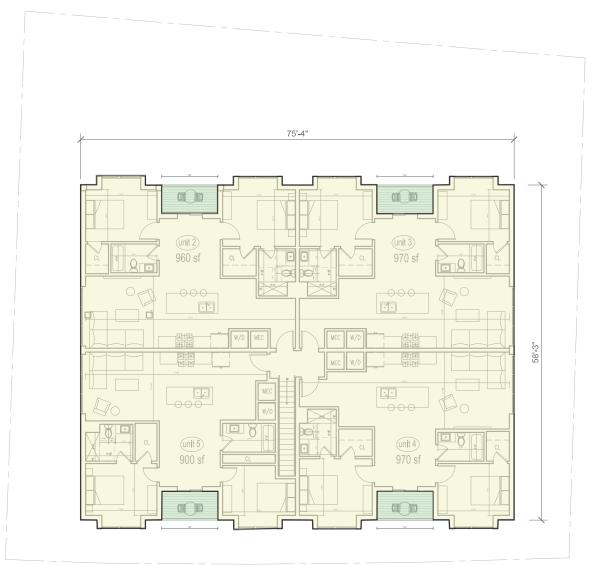
### **FACADE MATERIALS AND PRODUCTS**



### **OPEN SPACE VS BUILT AREA**

## **TOTAL AREA 8970SF**





N

Massachusetts Avenue

### **GROUND FLOOR**

3447SF

2

2465 SF

30

3058 SF

### **SECOND FLOOR**



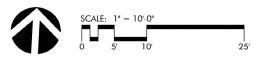
200 SF



4293 SF









### **LANDSCAPE ELEMENTS**



Granite Curbing at Plant Bed



Visitor Bike Racks



6' Ht. Board Fence



4' Ht. Open Picket Fenc

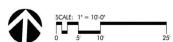


Blu 80 Smooth 'Shale Grey' Pervious Paver by Techo-bloc (linear pattern)



Blu 80 Smooth 'Onyx Black' Pervious Paver by Techo-bloc (accent paving)







Landscape Architecture

42" Ht. Metal Guardrail

## LANDSCAPE PLANT CATEGORY



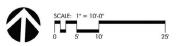






DD C	ARIE DI	ANT LIST: 1513-1519 MASS AVE.			
	QTY.	LATIN NAME	COMMON NAME	min. size	NOTES
AL	4	Amelanchier laevis	Serviceberry	2" cal.	B&B
BP	3	Betula papyifera	Paper Birch	3" cal.	B&B
CA	2	Cedrus atlantica 'Horstmann'	Horstmann Blue Atlas Cedar	4-6' Ht.	B&B
CC	1	Cercis canadensis 'Ruby Falls'	Ruby Falls Redbud	2" cal.	B&B
QW	5	Quercus x warei 'Long'	Regal Prince Oak	3" cal.	B&B
TO	13	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6-8 Ht.	B&B
TP	3	Thuja plicata 'Green Giant'	Green Giant Arborvitae	8-10' Ht.	B&B
UA	1	Ulmus americana 'Jefferson'	Jefferson Elm	3" cal.	B&B
SHRL	JBS:				
HQ	8	Hydrangea guercifolia	Oakleaf Hydrangea	7 gal.	Pots
IC	13	Ilex crenata 'Sky Pencil'	Sky Pencil Holly	3 gal.	Pots
RT	1	Rhus typhina 'Bailtiger'	Tiger Eyes Staghorn Sumac	7 gal.	Pots
TC	9	Tsuga canadensis	Canadian Yew	7 gal.	Pots
PEREI	NNIALS:		22 - f	206	
mh	25	Muhlenbergia capillaris	Pink Muhly Grass 32 of 2	∠∠ <b>o</b> <sub>gal.</sub>	Pots
ts	24	Thymus sernyllum	Creening Thyme	1 at	Pots







# **CONTEXT RENDER**





January 7, 2025

Redevelopment Board Town of Arlington 730 Mass Ave., Town Hall Annex Arlington, MA 02476

Re: 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, Massachusetts

#### Chair Zsembery:

Please be advised that we represent the Applicant, IG Investments LLC, in connection with Special Permit, Docket #3821, for properties located at 1513-1515 and 1517-1519 Massachusetts Ave, Arlington, Massachusetts. Based upon our last hearing before your Board on December 2, 2024, several modifications have been made to the proposed project which are reflected on the plans and submission materials. Please find included a summary of Board comments and the Development Team's responses as well as specific updates to materials including:

- 1. Revised plan set including Existing Condition Photos, Site Plan, Floor Plans, Roof Plan, Elevations, Façade Design Plan, Façade Characteristics, Façade Materials and Products, Landscape vs Built Area (Open Space Calculation), Public Realm Interface, Landscape Elements, Landscape Plant Category, and Context Rendering;
- 2. Proposed Plot Plan;
- 3. Operations and Maintenance Plan;
- 4. Civil Engineering Design Narrative;
- 5. LEED Checklist;
- 6. Solar Assessment;
- 7. Lighting Plan;
- 8. Stormwater Report.

# Fletcher Tilton

#### FletcherTilton.com

WORCESTER | FRAMINGHAM | BOSTON | PROVIDENCE | CAPE COD | MEDFIELD | NEW BEDFORD

#### <u>Updates</u>

The Development Team last appeared before the Arlington Redevelopment Board on December 2, 2024. At that meeting, the Team introduced the revised proposal which included a mixed-use building with five residential uses, one commercial space, and associated parking, bike parking, and landscaping updates. The Board appeared generally in favor of the changes and appreciated both the responsiveness to prior feedback as well as the ability to modify the project in such a timely manner. However, the Board did have several design questions as well as requests for additional information. Please see below a summary of the feedback received and the Team's responses:

Consider the overall fenestration, specifically the commercial space versus the parking area on the first floor.

-The Team has reexamined the overall fenestration and made numerous updates. Specifically, the focus of the building on the first floor relates directly to the residential entrance and commercial entrance/occupiable space with the introduction of signage and large windows. The parking and sprinkler area is a continuation of the building materials above, which creates a distinct difference between active uses and parking and utility areas. Additionally, the windows at the various levels have been aligned.

Consider the openings to the parking area on the rear and left side of the building and include trim and detail to correctly show the opening.

-Revisions have been made to the trim to denote a separation between the first and second floor and correctly show the opening.

Provide a solar energy assessment in accordance with the requirements in the Zoning Bylaw and the Board's Rules and Regulations.

-A solar assessment has been completed by Great Sky Solar and has been submitted as a part of this package.

Provide a LEED checklist and narrative.

-An updated LEED checklist has been provided and a LEED narrative has been completed and submitted as part of this package.

Provide a roof plan showing the location of mechanical equipment as well as venting from the interior units.

-A roof plan has been submitted as part of the architectural package and is labeled "Roof View". The plan shows venting areas.

Provide a landscape plan including street trees, other landscaping, grading, and how water will flow off the site.

-Multiple open space and landscape exhibits have been submitted. A full landscape package was completed by Verdant Landscape Architecture. The plans are labeled "Landscape vs Built Area", "Public Realm Interface", "Landscape Elements", "Landscape Plant Category".

The plans show the amount of open space, location of landscaping, and plant species. Water flow is shown on the Proposed Plot Plan and Operations & Maintenance Plan was completed by Spruhan Engineering, P.C.

Provide a lighting plan.

-A lighting plan was complete and submitted.

Provide information about a warning system for the driveway.

-A proposed mirror for incoming traffic has been located on the Proposed Plot Plan.

Update the site plan to show trash and recycling locations.

-The Site Plan within the Architectural set of plans shows the proposed trash and recycling area, which will consist of an enclosure. The location of the trash and recycling area allows for efficient storage and removal.

Provide updated drawings showing the location and size of commercial signage.

-The updated drawings propose signage for both the residential and commercial uses. The final size of the signage will comply with Arlington regulations and the Applicant welcomes the opportunity to further discuss the size, location, and design of the signage with the Board.

Provide an updated stormwater plan.

-An updated stormwater plan has been completed and submitted as part of this resubmission.

Please feel free to contact our office should you have any questions. Thank you.

Very truly yours,

### Matthew J. Eckel, Esq.

**Fletcher Tilton PC** 

The Mercantile Building 100 Front Street, 5<sup>th</sup> Floor Worcester, MA 01608 Tel. 508.459.8097

Fax. 508.459.8397

Email: meckel@fletchertilton.com

#### NOTES:

1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 5/10/2024.

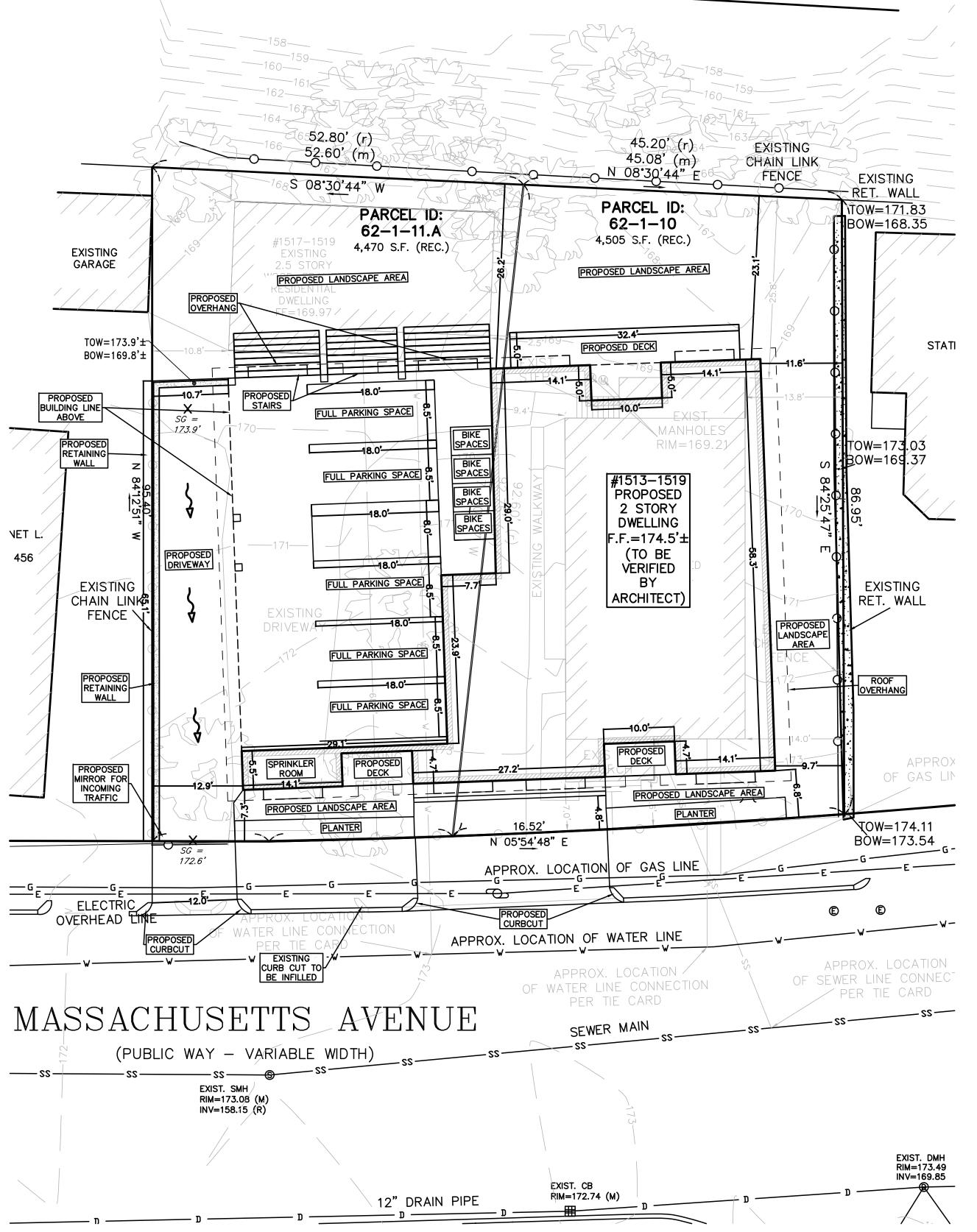
2. DEED #1513-1517: BOOK 26219, PAGE 127 DEED #1517-1519: BOOK 11361, PAGE 019 PLAN 1036 OF 1941; STREET LAYOUT 1913 STREET LAYOUT 1892

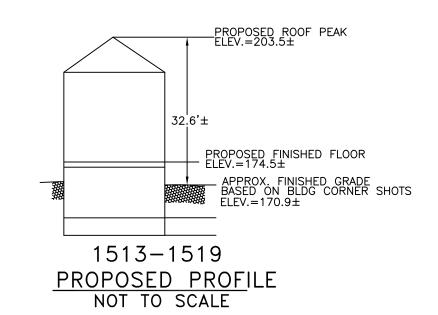
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS

- 3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
- 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0412E, IN COMMUNITY NUMBER: 250177, DATED 6/4/2010.
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
- 7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
- 8. THE ELEVATIONS SHOWN ARE BASED ON CITY OF ARLINGTON DATUM.

	I ECEND									
	LEGEND									
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<u> </u>	STONE POST									
	TREE									
凡	TREE STUMP									
<u></u>	SHRUBS/FLOWERS									
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₩	METAL POST									
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**	HYDRANT									
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(E)	ELECTRIC MANHOLE									
EL	ELECTRIC HANDHOLE									
C	UTILITY POLE									
≎	LIGHT POLE									
<b>W</b>	MANHOLE									
148.00	SPOT GRADE									
TW	TOP OF WALL									
BW	BOTTOM OF WALL									
	EXISTING BUILDING									
	RETAINING WALL									
~~~~~	STONE WALL									
<u> </u>	FENCE									
	TREE LINE									
S	SEWER LINE									
D	DRAIN LINE									
	WATER LINE									
G	GAS LINE									
——Е	UNDERGROUND ELECTRIC LINE									
OHW	OVERHEAD WIRES									
	CONTOUR LINE (MJR)									
	CONTOUR LINE (MNR)									









Spruhan Engineering, P.C.

> 80 JEWETT ST, (SUITE 2) NEWTON, MA 02458

Tel: 617-816-0722 Email:edmond@spruhaneng.com

1513-1519
MASSACHUSETTS
AVENUE, ARLINGTON
MASSACHUSETTS

PROPOSED PLOT PLAN

## REVISION BLOCK

BY	DESCRIPTION	DATE
M.L	MODIFIED PER CLIENT'S REQUEST	12.07.24
		<u> </u>

All legal rights including, but not limited to, copyright and design patent rights, ir the designs, arrangements and plans shown on this document are the property of Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C.. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.



DATE:	07/18/2024
DRAWN BY:	M.L
CHECKED BY:	c.c
APPROVED BY:	E.S

PROPOSED PLOT PLAN

SHEET 1 OF 1

GRAPHIC SCALE

10 0 5 10 20 40

( IN FEET )
1 inch = 10 ft.



#### LEED v4 for Building Design and Construction: Multifamily Midrise

Project Checklist

Project Name: 1513 Massachusetts Ave Date:12/15/2024

1 Credit

1 Credit

1 Credit

1 Credit

11 0 95 TOTALS

2 Credit Integrative Process

2

11	0	2	Loca	tion and Transportation	15
Υ			Prereq	Floodplain Avoidance	Required
			_	PERFORMANCE PATH	
			Credit	LEED for Neighborhood Development Location	15
				PRESCRIPTIVE PATH	
7			Credit	Site Selection	8
2			Credit	Compact Development	3
2			Credit	Community Resources	2
		2	Credit	Access to Transit	2
0	0	7	Susta	ainable Sites	7
Υ			Prereq	Construction Activity Pollution Prevention	Required
Υ			Prereq	No Invasive Plants	Required
		2	Credit	Heat Island Reduction	2
		3	Credit	Rainwater Management	3
		2	Credit	Non-Toxic Pest Control	2
0	0	10	Wate	er Efficiency	12
Υ			Prereq	Water Metering	Required
				PERFORMANCE PATH	
			Credit	Total Water Use	12
				PRESCRIPTIVE PATH	
		6	Credit	Indoor Water Use	6
		4	Credit	Outdoor Water Use	4
0	0	37	Ener	gy and Atmosphere	37
Υ			Prereq	Minimum Energy Performance	Required
Υ			Prereq	Energy Metering	Required
Υ			Prereq	Education of the Homeowner, Tenant or Building Manager	Required
		30	Credit	Annual Energy Use	30
		5	Credit	Efficieng Hot Water Distribution	5
		2	Credit	Advanced Utility Tracking	2
0	0	9	Mate	rials and Resources	9
Υ			Prereq	Certified Tropical Wood	Required
Υ			Prereq	Durability Management	Required
		1	Credit	Durability Management Verification	1
		-	1	Environmentally Preferable Products	F
		5	Credit	Environmentally Freierable Froducts	5

0	0	18	Indoor	Environmental Quality	18
Y	•	10	Prereq	Ventilation Ventilation	Required
Y			Prereq	Combustion Venting	Required
Y			Prereq	Garage Pollutant Protection	Required
Y			Prereq	Radon-Resistant Construction	Required
Υ			Prereq	Air Flltering	Required
Υ			Prereq	Environmental Tobacco Smoke	Required
Υ			Prereq	Compartmentalization	Required
		3	Credit	Enhanced Ventilation	3
		2	Credit	Contaminant Control	2
		3	Credit	Balancing of Heating and Cooling Distribution Systems	3
		3	Credit	Enhanced Compartmentalization	3
		2	Credit	Enhanced Combustion Venting	2
		1	Credit	Enhanced Garage Pollutant Protection	1
		3	Credit	Low Emitting Products	3
		1	Credit	No Environmental Tobacco Smoke	1
			-		
0	0	6	Innova	tion	6
Υ			Prereq	Preliminary Rating	Required
		5	Credit	Innovation	5
		1	Credit	LEED AP Homes	1
			-		
0	0	4	Region	al Priority	4

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

Possible Points:

Regional Priority: Specific Credit

Regional Priority: Specific Credit

Regional Priority: Specific Credit

Regional Priority: Specific Credit

DRAWN BY: DATE: NOTES:

PROJECT:

Calculation Summary Avg/Min Max/Min CalcType Units 2.82 20.5 SITE LIGHTING Fc N.A. N.A. Illuminance

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e Schedule													
Qty	,	Label					Arrang	gement		LLF	Description		Lum. Lumens
13		WL1					Single			0.900	CY3S330K12D1CWF	-P	1855
3		GL1					Single			0.900	CPL20UCSBCR		2489

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MH: 8.500

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MH: 10.000 MH: 10.000 MH: 10.000

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**BR.**P**G**9 456

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# PHOTOVOLTAIC ROOF MOUNT SYSTEM

112 MODULES-ROOF MOUNTED - 46.48 kWDC 1513 MASSACHUSETTS AVE, ARLINGTON, MA 02476

W) MODULES

THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS

A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690-47 AND 250-50 THROUGH 60 250-166 SHALL BE PROVIDED PER NEC, GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO AT THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, OR IS ONLY METALLIC WATER PIPING, A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO GREATER THAN #8 AWG COPPER AND BONDED TO THE EXISTING GROUNDING

FRAMES, EQUIPMENT, AND CONDUCTOR ENCLOSURES SHALL BE

HEIGHT OF INTEGRATED AC/DC DISCONNECT SHALL NOT EXCEED 6'

FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (OR INVERTER) IF SMALLER THAN #6 AWG COPPER WIRE PER NEC 250-64B. THE GROUNDING ELECTRODE CONDUCTOR

ALL EXTERIOR CONDUIT SHALL BE PAINTED TO MATCH ADJACENT

THE PV CONNECTION IN THE PANEL BOARD SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER LOCATION

ARE NOT NECESSARILY TO SCALE. ALL DIMENSIONS SHALL BE

## **DESIGN CRITERIA:**

ROOF TYPE: - COMP SHINGLE NUMBER OF LAYERS: - 01 ROOF FRAME: - 2"X6" TRUSS @24" O.C. STORY: - TWO STORY SNOW LOAD: - 40 PSF WIND SPEED :- 127 MPH WIND EXPOSURE:- C **EXPOSURE CATEGORY:- II** COORDINATES:- 42.425598, -71.191057

**GOVERNING CODES:** 

2023 NATIONAL ELECTRICAL CODE (NEC) 2021 INTERNATIONAL FIRE CODE (IFC) 2021 INTERNATIONAL BUILDING CODE (IBC) 2021 INTERNATIONAL RESIDENTIAL CODE WITH MASSACHUSETTS AMENDMENTS(IRC)

## SHEET INDEX

PV-0 **COVER SHEET** PV-1 PV-2

PV-4+ **EQUIPMENT SPEC SHEETS** 

SITE PLAN WITH ROOF PLAN **ROOF PLAN WITH MODULES** PV-3 ATTACHMENT DETAILS

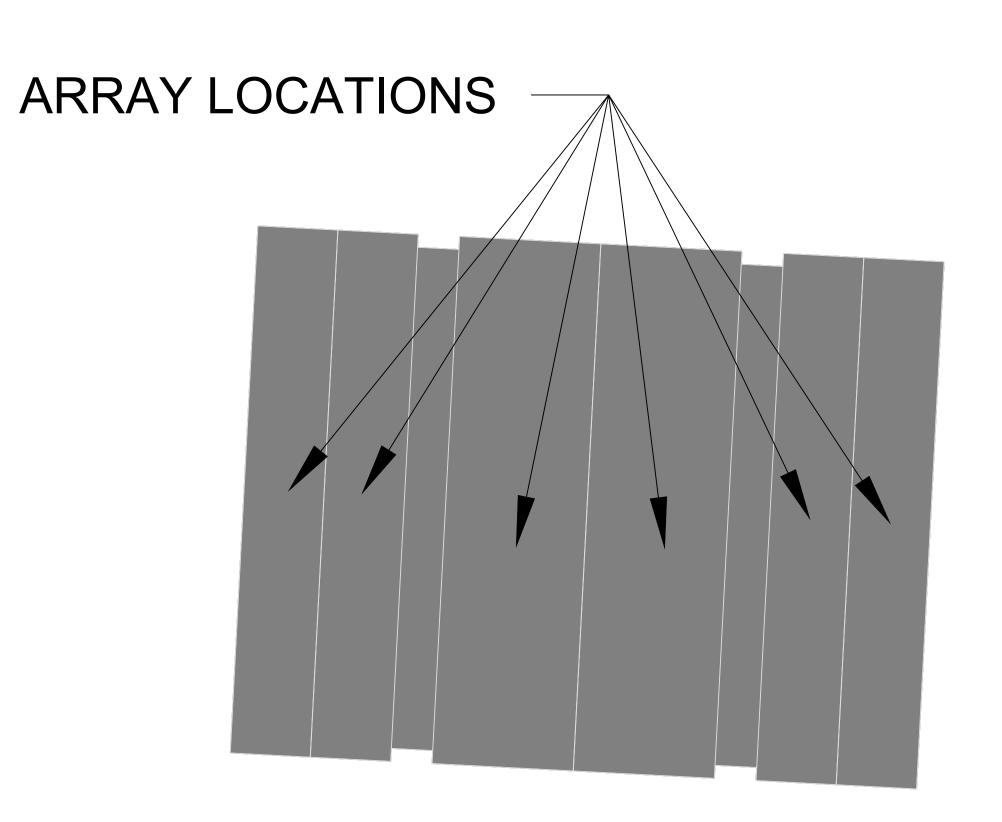
EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE

PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING

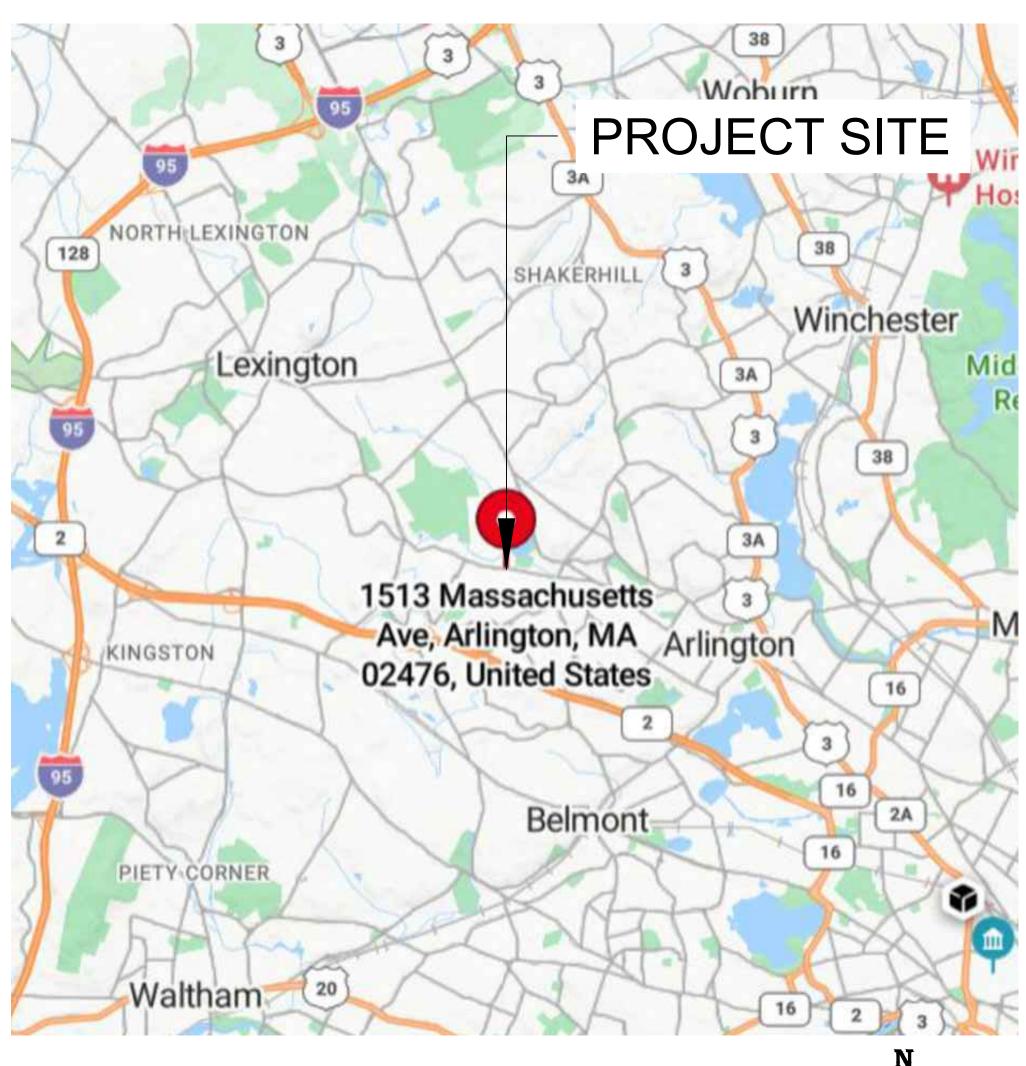
ALL SIGNAGE WILL BE INSTALLED AS REQUIRED BY AND 2020 NEC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED

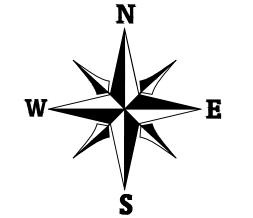
SITE CONDITIONS SHALL PREVAIL IF NO SCALE IS GIVEN. DRAWINGS







**VICINITY MAP** SCALE: NTS PV-0



**GREAT SKY** SOLAR

3 BOW ST SUITE 3 LEXINGTON, MA 02420 PHONE NUMBER: 8889660726 EMAIL:office@greatskysolar.com

DRAWN BY N.G.E.S

VERSION								
DESCRIPTION	DATE	REV						
INITIAL RELEASE	12/19/2024	UR						
PROJECT NAME								

SHEET NAME

**COVER SHEET** 

SHEET SIZE

24" X 36"

SHEET NUMBER PV-0

SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD ROOF #4 ROOF #5 — (30) HANWHA Q. CELLS Q. PEAK DUO (15) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES BLK ML-G10+ (415W) MODULES ROOF #3 415W) MODULES (30) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES PROPERTY LINE ROOF #2 (15) HANWHA Q. CELLS Q. PEAK DUO 97.70 BLK ML-G10+ (415W) MODULES 105.89' ROOF #6 HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES ING WAY EXISTI DRIVEV ROOF #1 - 13'-1" 🚽 (15) HANWHA Q. CELLS Q. PEAK DUO BLK ML-G10+ (415W) MODULES **EXISTING** PATHWAY 98.02' PROPERTY LINE TWO- STORY — HOUSE **ROOF ACCESS POINT** MASSACHUSETTS AVE INTERNATIONAL FIRE CODE SECTION 605.11.1.2 FOR RESIDENTIAL R-3 OCCUPANCIES AT LEAST THREE (3) FEET OF CLEARANCE ALONG THE EDGE (RAKE) OF THE ROOF TO A PANEL AND AT LEAST THREE (3) FEET FROM THE RIDGE OF THE ROOF TO A PANEL. PANELS SHALL BE AT LEAST ONE AND ONE-HALF (1-1/2) FEET FROM SITE PLAN WITH ROOF PLAN A VALLEY OR HIP. NO CLEARANCE IS REQUIRED AT THE EAVE. INTERNATIONAL FIRE CODE SECTION 605.11.1.2.4 ROOFS WITH HIPS AND VALLEYS - WHERE ADJACENT TO THE HIP OR VALLEY. GAS METER LOCATED IN PROXIMITY OF THE PV INSTALLATION, LOAD CENTER, AND/OR DISCONNECTS. DISCONNECTS SHALL 1/8" = 1'-0" BE LOCATED IN COMPLIANCE WITH UTILITY AND THE AHJ (AUTHORITY HAVING JURISDICTION). PV INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES



3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889660726
EMAIL:office@greatskysolar.com

DRAWN BY N.G.E.S

VERSION									
DESCRIPTION	DATE	REV							
INITIAL RELEASE	12/19/2024	UR							

PROJECT NAME

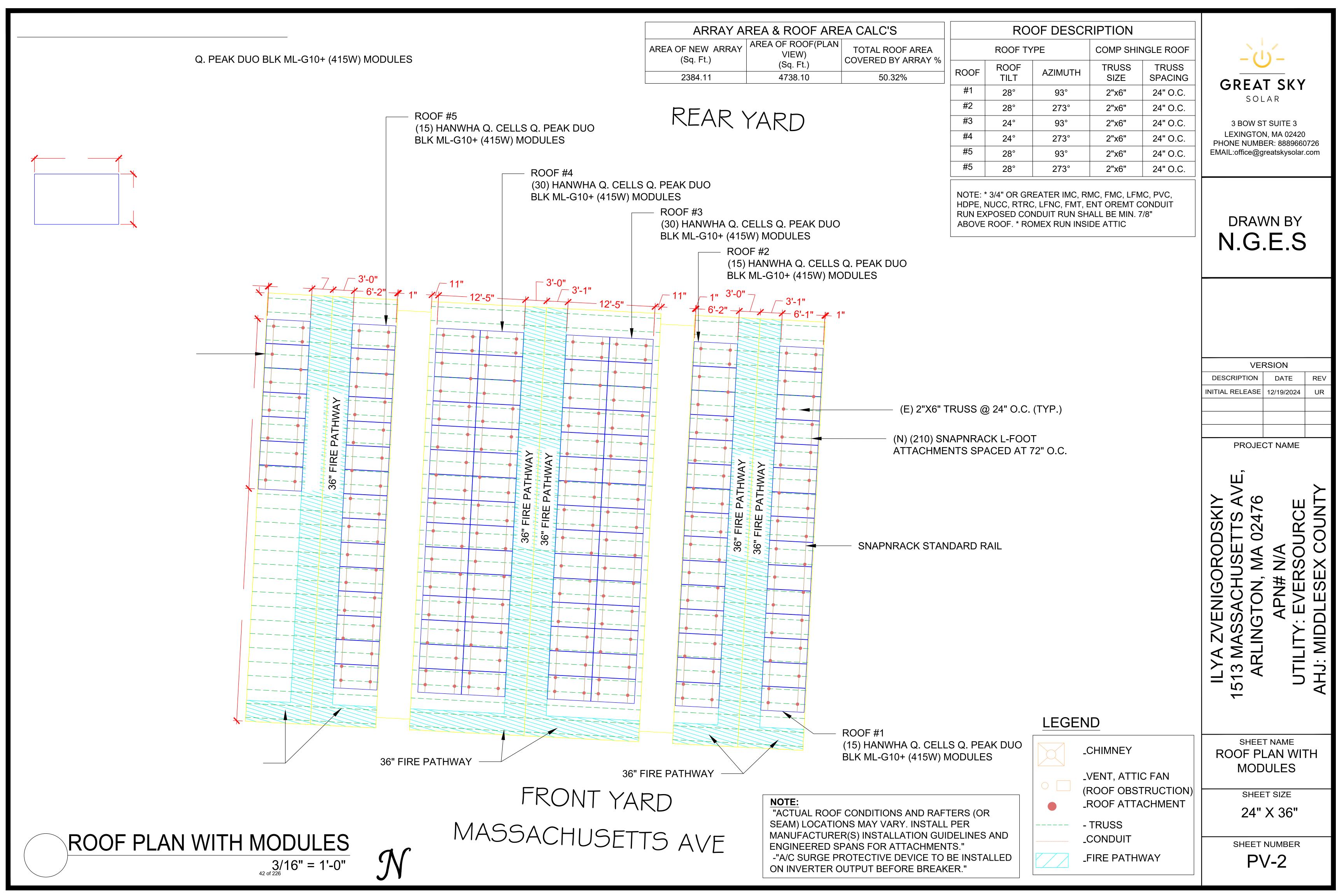
1513 MASSACHUSETTS AVE,
ARLINGTON, MA 02476
APN# N/A
UTILITY: EVERSOURCE
AHJ: MIDDLESEX COUNTY

SHEET NAME
SITE PLAN WITH
ROOF PLAN

SHEET SIZE

24" X 36"

SHEET NUMBER



NOTE: ACTUAL ROOF CONDITIONS AND RAFTERS (OR SEAM) LOCATIONS MAY VARY. INSTALL PER MANUFACTURER(S) INSTALLATION GUIDELINES AND ENGINEERED SPANS FOR ATTACHMENTS



3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889660726
EMAIL:office@greatskysolar.com

DRAWN BY N.G.E.S

VERSION									
DESCRIPTION	DATE	REV							
INITIAL RELEASE	12/19/2024	UR							

PROJECT NAME

ILYA ZVENIGORODSKIY 1513 MASSACHUSETTS AVE, ARLINGTON, MA 02476 APN# N/A UTILITY: EVERSOURCE

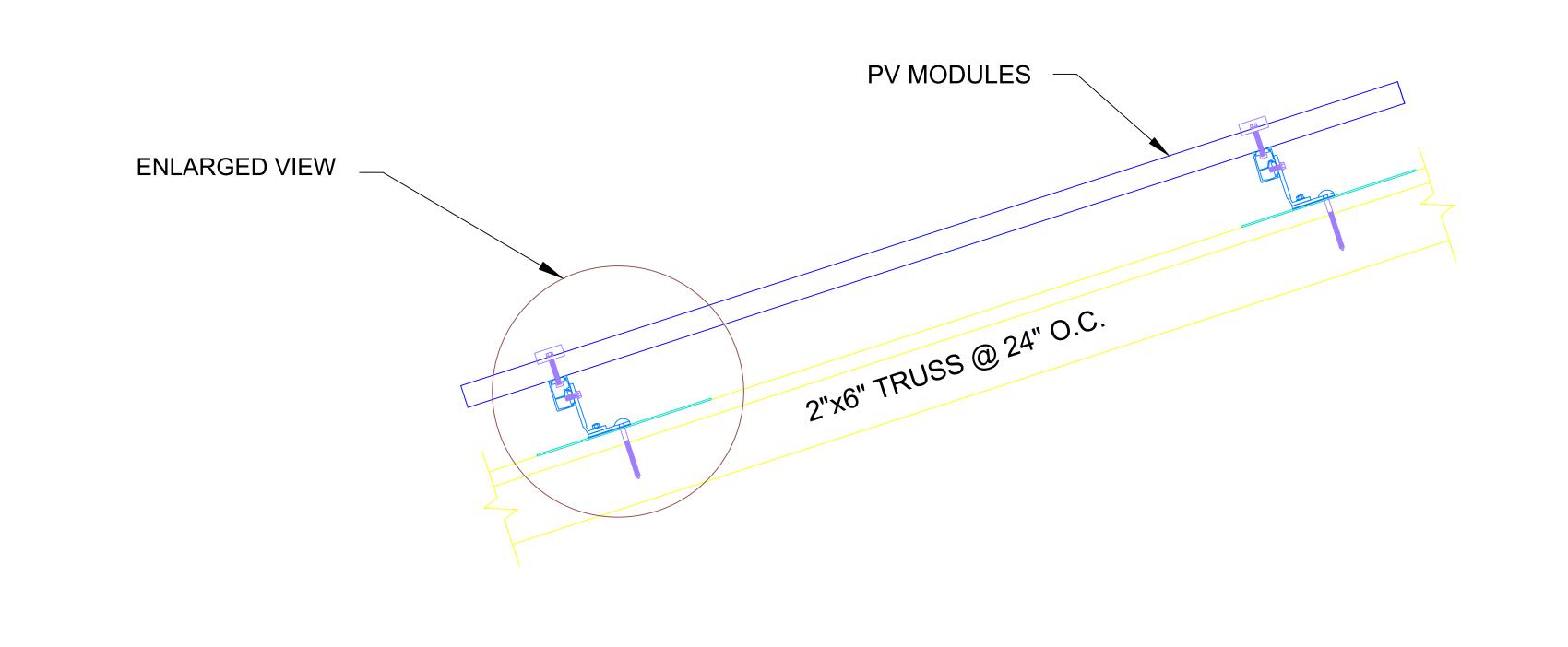
MIDDLESE)

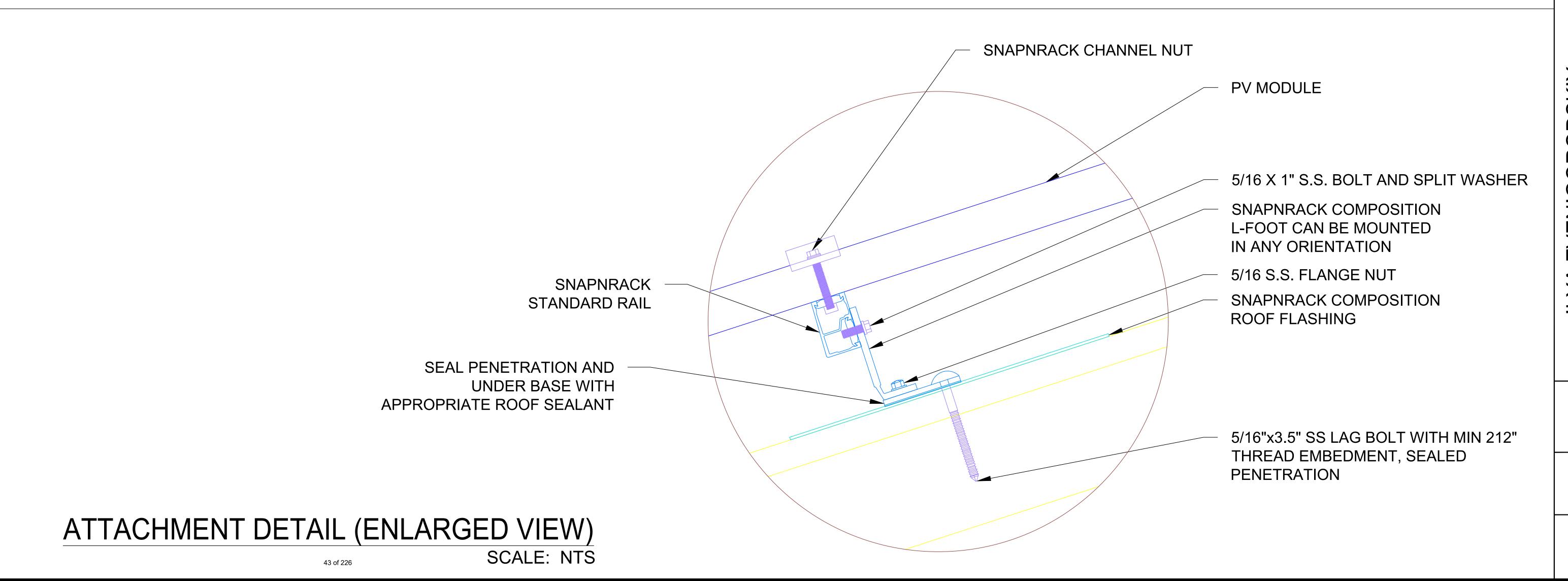
SHEET NAME
ATTACHMENT
DETAIL

SHEET SIZE

24" X 36"

SHEET NUMBER





# BLK ES





# **Breaking the 21% efficiency barrier**

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.0%.



## A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty<sup>1</sup>.



## **Enduring high performance**

Long-term yield security with Anti LeTID Technology, Anti PID Technology<sup>2</sup> and Hot-Spot Protect.



## Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



# The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

<sup>1</sup> See data sheet on rear for further information. <sup>2</sup> APT test conditions according to IEC/TS 62804-1:2015, method A (-1500 V, 96 h)



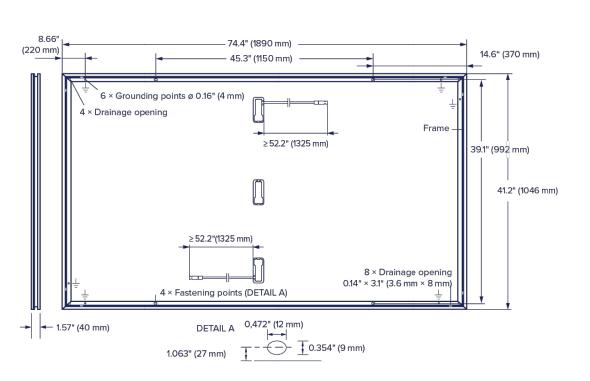




# Q.PEAK DUO BLK ML-G10+ SERIES

# ■ Mechanical Specification

Format	74.4 in × 41.2 in × 1.57 in (including frame) (1890 mm × 1046 mm × 40 mm)
Weight	51.8 lbs (23.5 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	$4 \mathrm{mm^2}$ Solar cable; (+) $\geq$ 52.2 in (1325 mm), (-) $\geq$ 52.2 in (1325 mm)
Connector	Stäubli MC4; IP68



## **■ Electrical Characteristics**

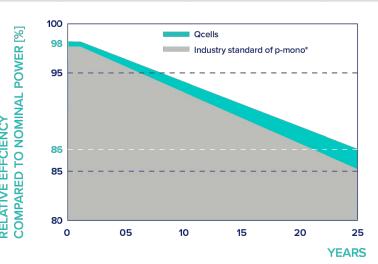
POW	/ER CLASS			385	390	395	400	405	410	415
MININ	MUM PERFORMANCE AT STANDARD TEST COND	ITIONS, ST	C1 (POWER	TOLERANCE -	+5W/-0W)					
	Power at MPP <sup>1</sup>	$P_{MPP}$	[W]	385	390	395	400	405	410	415
	Short Circuit Current <sup>1</sup>	I <sub>sc</sub>	[A]	11.04	11.07	11.10	11.14	11.17	11.20	11.23
In C	Open Circuit Voltage <sup>1</sup>	$V_{oc}$	[V]	45.19	45.23	45.27	45.3	45.34	45.37	45.41
	Current at MPP	I <sub>MPP</sub>	[A]	10.59	10.65	10.71	10.77	10.83	10.89	10.95
	Voltage at MPP	$V_{MPP}$	[V]	36.36	36.62	36.88	37.13	37.39	37.64	37.89
	Efficiency <sup>1</sup>	η	[%]	≥19.5	≥19.7	≥20.0	≥20.2	≥20.5	≥20.7	≥21.0
	Efficiency <sup>1</sup>	η	[%]	≥19.5	≥19.7	≥20.0	≥20.2	≥20.5	≥20.7	

#### MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT<sup>2</sup>

	Power at MPP	$P_{MPP}$	[W]	288.8	292.6	296.3	300.1	303.8	307.6	311.3
mnmir	Short Circuit Current	I <sub>sc</sub>	[A]	8.90	8.92	8.95	8.97	9.00	9.03	9.05
	Open Circuit Voltage	V <sub>oc</sub>	[V]	42.62	42.65	42.69	42.72	42.76	42.79	42.83
Ξ	Current at MPP	I <sub>MPP</sub>	[A]	8.35	8.41	8.46	8.51	8.57	8.62	8.68
	Voltage at MPP	V <sub>MPP</sub>	[V]	34.59	34.81	35.03	35.25	35.46	35.68	35.89

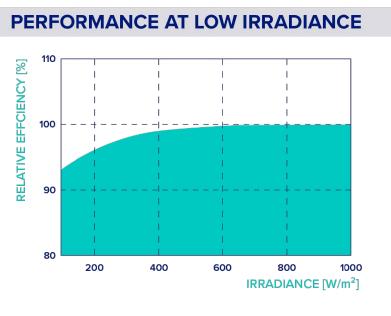
 $^{1}$ Measurement tolerances  $P_{MPP} \pm 3\%$ ;  $I_{SC}$ ;  $V_{OC} \pm 5\%$  at STC:  $1000 \, \text{W/m}^2$ ,  $25 \pm 2\,^{\circ}$ C, AM 1.5 according to IEC 60904-3 •  $^{2}$ 800 W/m², NMOT, spectrum AM 1.5

# Qcells PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.



Typical module performance under low irradiance conditions in

riigilest production capacity in 2021 (February 2021)	companson to 31C conditions (25 C, 1000 W/III ).						
TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I <sub>sc</sub>	α	[%/K]	+0.04	Temperature Coefficient of V <sub>oc</sub>	β	[%/K]	-0.27
Temperature Coefficient of P <sub>MPP</sub>	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3°C)

## Properties for System Design

\*Standard terms of guarantee for the 5 PV companies with the

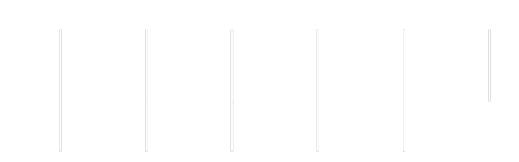
Maximum System Voltage	$V_{SYS}$	[V]	1000 (IEC)/1000 (UL)
Maximum Series Fuse Rating		[A DC]	20
Max. Design Load, Push/Pull <sup>3</sup>		[lbs/ft²]	75 (3600 Pa)/75 (3600 Pa)
Max. Test Load, Push/Pull <sup>3</sup>		[lbs/ft <sup>2</sup> ]	112 (5400 Pa)/112 (5400 Pa)
<sup>3</sup> See Installation Manual			

PV module classification	Class
Fire Rating based on ANSI/UL 61730	TYPE
Permitted Module Temperature	−40°F up to +185°
on Continuous Duty	(-40°C up to +85°C

## Qualifications and Certificates

UL61730-1 & UL61730-2, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells),







\*Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL hgc-inquiry@gcells.com | WEB www.gcells.com

**QCEIIS** 



3 BOW ST SUITE 3
LEXINGTON, MA 02420
PHONE NUMBER: 8889660726
EMAIL:office@greatskysolar.com

DRAWN BY N.G.E.S

VE	RSION	
DESCRIPTION	DATE	REV
INITIAL RELEASE	12/19/2024	UR

PROJECT NAME

SSACHUSETTS AVE, GTON, MA 02476 APN# N/A

SHEET NAME

SPEC SHEETS

SHEET SIZE 24" X 36"

SHEET NUMBER

UR-40 UR-60





# e in Rooftop Solar



Mounts available for all roof types



All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

# Ultra Rail Today

onrack.com/resources onrack.com/configurator onrack.com/where-to-buy

# SnapNrack Ultra Rail System

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

# The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



# **Unparalleled Wire Management**

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit Clamps
- System is fully bonded and listed to UL 2703
   Standard

# Heavy Duty UR-60 Rail

- UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads
- Taller, stronger rail profile includes profilespecific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience



# Quality. Innovative. Superior.

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

**877-732-2860** www.snapnrack.com contact@snapnrack.com
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GREAT SKY

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PHONE NUMBER: 8889660726
EMAIL:office@greatskysolar.com

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VERSION					
DESCRIPTION	DATE	REV			
INITIAL RELEASE	12/19/2024	UR			

PROJECT NAME

513 MASSACHUSETTS AVE ARLINGTON, MA 02476 APN# N/A UTILITY: EVERSOURCE

SHEET NAME

SPEC SHEETS

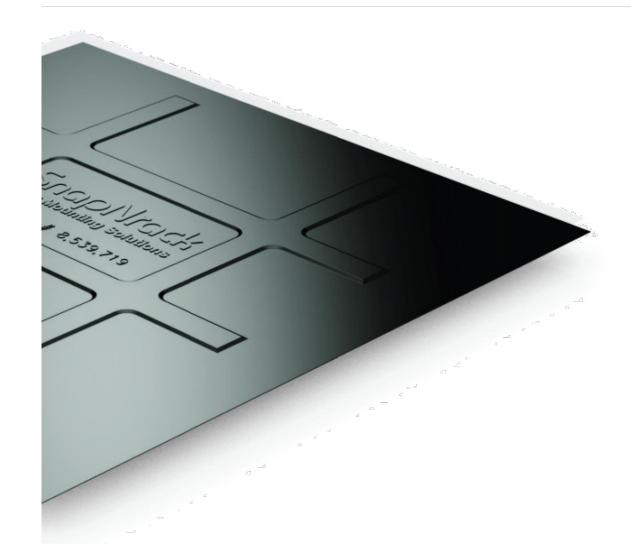
SHEET SIZE

24" X 36"

SHEET NUMBER

# Series 100

# L Foot



# 'eatherproof achment



Preassembled, snap-in hardware reduces installation time



Included in Series 100 UL 2703 Listing

# lashed L Foot Today

nrack.com/resources nrack.com/configurator nrack.com/where-to-buy

# **SnapNrack Series 100 Flashed L Foot Kit**

is an industry-leading, weatherproof solution for attaching to composition shingle roofs. The Flashed L Foot provides a fully flashed method for mounting the SnapNrack Series 100 system. The combination of Series 100 and the Flashed L foot is guaranteed to improve labor times and ensure the highest quality install possible.

# Flashing

- Available in black galvanized steel or aluminum for enhanced corrosion resistance
- L Foot is attaches to bottom edge of flashing, removing the need for shingle cutting
- Innovative stamped features provide increased rigidity

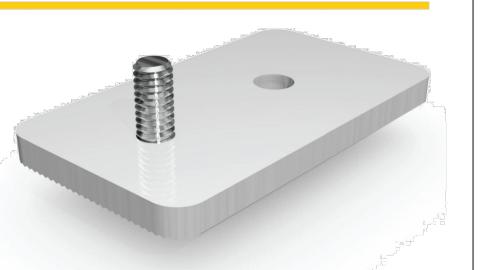


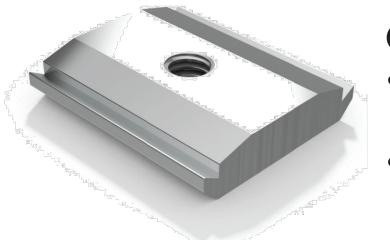
# L Foot

- Engineered for maximum adjustability with the ability to orient in any direction
- Vertical adjustability up to 3" using available spacers

# L Foot Base

- Provides a long lasting watertight seal over the life of the system that does not rely on rubber (elastomeric seals) that will degrade over time
- Easily installs with off-the-shelf lag screws





# **Channel Nut**

- Provides snap-in installation to the rail channel with no drilling required
- Wide range of adjustability due to sliding ability in rail prior to final tightening

# Quality. Performance. Innovation.

SnapNrack solutions are focused on simplifying the installation experience through intuitive products and the best wire management in the industry.

SnapNrack

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VERSION				
DESCRIPTION	REV			
NITIAL RELEASE	12/19/2024	UR		

PROJECT NAME

1513 MASSACHUSETTS AVE ARLINGTON, MA 02476 APN# N/A UTILITY: EVERSOURCE

SHEET NAME

SPEC SHEETS

SHEET SIZE

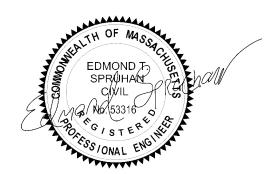
24" X 36"

SHEET NUMBER

# SPRUHAN ENGINEERING, P.C.

# OPERATIONS & MAINTENANCE PLAN

1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.



Prepared by: Spruhan Engineering, P.C.

December 17, 2024

**Operations & Maintenance Plan** 

Introduction

The following Stormwater Operations & Maintenance plan is for 1513-1519 Massachusetts avenue,

Arlington, MA. All erosion and sediment control measures to be used are to be constructed and installed

according to the 'Massachusetts Erosion and Sediment Control Guidelines for Urban and Sub-Urban Areas.'

The plan consists of the following elements:

• Owners' information

• Operation and maintenance guidance – Pre and Post Construction

• Landscape installation and maintenance guidance

Proposed inspection log

All erosion and sediment control measures must be installed prior to the commencement of any work. All sediment and erosion control measures shall remain in place until the entire site has been stabilized. The site is

deemed stabilized when all landscaped areas have been loamed and seeded with vegetation having had the chance to establish itself. Any proposed paved areas shall have their binder course of pavement installed prior

to the removal of these control measures.

The long-term operation and maintenance of a stormwater management system is as critical to its performance

as its design and construction. Proper operation and maintenance ensure that the BMP will continue to remove pollutants effectively over the long-term, decreases the risk of re-suspending sediment; and therefore, improves

water quality. Without proper maintenance, BMPs are likely to fail and no longer provide the necessary

stormwater treatment.

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. Annual reports

(example below) should be submitted to the Town Engineer every January for the prior year.

**Property Owners: IG Investments LLC** 

Name and contact information:

**Managers:** ILYA ZVENIGORODSKIY

Address: 226 Harvard St, Brookline, MA, 02446

**Contact info:** 860-833-4081

Change on ownership: The owner(s) of the stormwater management systems, with the exception of those associated with two-family dwellings, shall notify the Department of Public Works and Conservation

Commission of changes in ownership or assignment of financial responsibility.

This plan is valid in perpetuity and any future property owners are solely responsible for the management of

the stormwater system on-site in accordance with this O&M Plan

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#### **Operations & Maintenance**

The following operations and maintenance plan has been developed in order to preserve the drainage infrastructure that will be constructed and to ensure the drainage and infiltration system continues to function as designed.

#### • Before & During Construction Operation and Maintenance Plan:

- Significant efforts shall be made to only disturb the minimum amount of area necessary to reduce potential erosion and sediment runoff. The control of dust in disturbed areas shall consist of at the least, wetting of disturbed soil or application of calcium chloride as required to minimize airborne dust.
- A stabilized construction entrance shall be installed to reduce the tracking of material onto the main road, &, if necessary, a wheel wash station put in place.
- Hay wattles shall be installed per the site plan to prevent sediment from being washed off site.
- o All drainage structures shall be protected by filter fabric (or approved equal) to prevent sedimentation from entering the drainage system during the construction period.
- O Driveway, pavement, and roadway (if required) areas shall be swept to remove sediments prior to introduction into the storm water management system.
- O Drainage structures shall be inspected daily and cleaned as necessary of all sedimentation and construction materials during the construction period.
- The contractor is required to contact the engineer of record for drainage system inspection at least 72 hours prior to backfilling in order to receive inspection signoff.

#### Post Construction Operation and Maintenance Plan

Once the construction is completed, it is the owner's responsibility to maintain the items outlined below to ensure the efficiency and integrity of the drainage systems. The post construction inspections shall take place at a minimum of once during the Spring (March-May), and a minimum of once during the fall (September – November) and after every major storm.

- O Pipes shall be inspected on a minimum on a semi-annual basis. These inspections shall take place during the spring and fall months of the year. The inspector shall take note of any debris/sediment/clogging and shall document the condition of each structure. Based upon the observed condition, the inspector shall make recommendations if any further action is required.
- O All drainage structures, including manholes trench drains, area drains, cleanouts and catch basins, shall be inspected four times per year and shall be cleaned of all sand, debris, and sediment four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- o **Roof Gutters** shall be inspected annually and after major rain events. Remove leaves and sediment as necessary to allow rainwater to flow to system.

#### **o** Storm-tech SC-740 Maintenance procedures:

- Storm-tech system shall be inspected at a minimum on a semi-annual basis, or after a major storm event.
- Remove lid and cap from inspection ports which must be brought to finished grade.
- Using a flashlight and stadia rod, measure the depth of sediment
- If sediment is above 3" depth, then cleaning is required
- A licensed professional shall provide cleanout/ flushing services of all sediment and debris via cleanouts and catch basins located per plans.
- All caps and covers shall be replaced

#### Other Activities:

**Pavement Sweeping:** The paved areas shall be swept every quarter, so four (4) times per year.

**Lawn and Landscape Repairs:** The lawn and landscaped areas on the site shall be inspected in the spring and fall of each year and the areas shall be restabilized as needed by seeding as lawn or mulching landscaped areas.

An INSPECTION LOG example format is shown below on Table B.1. This must be filled every time an inspection or maintenance activity is performed on any element of the stormwater management on site, included but not limited to:

- Pretreatment devices.
- o Vegetation or filter media.
- o Control structures.
- o Embankments and slopes.
- o Inlet and outlet channels and structures.
- Underground drainage.
- o Sediment and debris accumulation in storage and forebay areas (including catch basins).
- o Any nonstructural practices.
- o Any other item that could affect the proper function of the stormwater management system

\* FINAL IMPORTANT NOTE: PROVISIONS MUST EXIST ALLOWING THE CITY OF NEWTON OR ITS DESIGNEE TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR THE PURPOSE OF INSPECTION.

ILYA ZVENIGORODSKIY PROPERTY OWNER

**ATTACHMENT A. LOG SHEET AND TABLES** 

#### OPERATION & MAINTENANCE PLAN LOG SHEET 1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.

#### **INSPECTION REPORT:**

Inspection Firm:	
Inspector's Name:	Date:
Signed:	
SYS	TEM MAINTENANCE:
Maintenance Firm:	Date:
Catch Basin Cleaned: Yes No Con	nments:
	_Comments:
•	_
	Comments:
•	
	oComments:
otoriiwater unit bystem dicanea. Tesiv	ocomments
Estimate of Material Removed:	
Other Comments:	
Signed:	

Table 1 - Inspection log for BMP's

STORMWATER MANAGEMENT SYSTEMS INSPECTION LOG						
DATE	NAME OF INSPECTOR	NAME/TYPE OF BMP INSPECTED	CONDITION OF BMP OBSERVED	DESCRIPTION OF NEED FOR MAINTENANCE	OBSERVATIONS OF ANY PHYSICAL CHANGES TO SYSTEM COMPARED TO AS BUILT PLAN	ANNUAL SUBMISSION TO DPW



#### SPRUHAN ENGINEERING, P.C.

80 Jewett St Unit One Newton, MA 02458 phone: 617-816-0722 email: edmond@spruhaneng.com

December 18, 2024

Arlington Department of Planning and Community Development (DPCD) 730 Massachusetts Ave, Arlington, MA 02476

RE: 1513-1519 Massachusetts Avenue,

Arlington, MA

The purpose of this letter is to give a brief description of the civil engineering design for the proposed project located at 1513-1519 Massachusetts Avenue, Arlington, MA.

The property is located in Massachusetts Avenue Between Lancaster Road and Hilbert Street. The existing property is bounded by residential dwellings on the sides. The existing roof area on the lot is 2039.95 S.F., the existing paved area is 1482.24 S.F., the existing impervious areas are 259.07 S.F., and the existing landscaped areas on the lot are 5,193.74 S.F. There is currently no infiltration system.

The development consists of a proposed 2 story dwelling, 5 Units, 1 garage and commercial level, and landscaped areas. The total proposed development roof will have an area of 4,677.02 S.F, the remaining impervious will have an area of 1181.78 S.F. and the remaining landscaped portion will have a footprint of 3,116.20 S.F.

The building will contain the utilities services described below:

- A new subsurface infiltration system composed of 12 Stormtech units and crushed stone pit below to capture the runoff from the site.
- A new 6" sewer line connected to the sewer main at Massachusetts Avenue.
- A new 1" water line connected to the water main at Massachusetts Avenue.
- A new 2" Fire line connected to the water main at Massachusetts Avenue.
- A new 6" drain overflow line connected to the drain main at Massachusetts Avenue.

In accordance with Section 2-(D)(1) of the City of Arlington stormwater management rules & regulations, the proposed development requires a major stormwater management permit because it will increase the amount of impervious surface at the Property by more than 1000 SF. Spruhan has designed the proposed stormwater management system to meet these standards.

The proposed infiltration system consists of 12 <u>Stormtech Chambers embedded in a crushed stone pit</u> with an overflow connection to the City's drainage system and is designed to control

the runoff from the site for the 2, 10, 25, and 100-Year 24-hour duration storm events and retain and infiltrate the storm of the large storm event after Arlington city requirements which will substantially improve drainage at the property.

The reduction of run-off for all storm events are show in the table below:

	Summary Table				
	Runoff F	low Rate	Volume of	f Runoff	
	EXISTING	PROPOSED	EXISTING	PROPOSED	
2-Year Storm	0.28 cfs	0.00 cfs	1,006 cfs	31 cfs	
10-Year Storm	0.50 cfs	0.04 cfs	1,850 cfs	181 cfs	
25-Year Storm	0.69 cfs	0.09 cfs	2,452 cfs	320 cfs	
100-Year Storm	1.0 cfs	0.18 cfs	3,454 cfs	579 cfs	

The runoff is going to be captured through downspouts. The proposed infiltration system is designed to provide a total storage of 2,511 CF and the total storage required for a 1.0-inch storm is 488.25 CF.

The proposed infiltration system complies with the City of Arlington stormwater management standards.

An Operations & Maintenance plan is provided for the information of the maintenance of the drainage system.

If you have any questions or desire additional information, please feel free to call.

Sincerely,

Edmond Spruhan 617-816-0722

# **STORMWATER REPORT FOR:**

1513-1519 Massachusetts Avenue, Arlington, MA





Prepared by: Spruhan Engineering, P.C.



80 Jewett St, Suite 1 Newton, MA 02458

1.0	Introduction	3
2.0	Existing Conditions	3
2.1	Existing Topography and Drainage Infrastructure	3
3.0	Proposed Conditions	4
3.1	Project Description	4
3.2	Storm Water Runoff	4
3.3	Infiltration system	4
4.0	Soil Information	5
Appei	ndix A – HydroCAD Calculations	7
Appei	ndix B – Soils Information	8

#### 1.0 Introduction

Spruhan Engineering, P.C. has prepared this Storm water Report for the proposed development located at 1513-1519 Massachusetts St, Arlington, Massachusetts.

The proposed development consists of a proposed 2 story dwelling, 5 Units, 1 garage and commercial level, and landscaped areas. The purpose of this report is to demonstrate that the proposed conditions do not create any increased flowrate or runoff from the site. This is achieved by installing an infiltration system.

#### 2.0 Existing Conditions

The existing property is located at 1513-1519 Massachusetts St, Arlington, Massachusetts. The site is bounded by residential dwellings on the sides. The property is located in Massachusetts St Between Lancaster Rd and Hilbert St. The existing roof area on the lot is 2039.95 S.F., the existing paved area is 1482.24 S.F., the existing impervious areas are 259.07 S.F., and the existing landscaped areas on the lot are 5,193.74 S.F.

#### 2.1 Existing Topography and Drainage Infrastructure.

In general, the property slopes from the East to the West of the lot ranging between approximately 8.5 %. As there is no drainage system currently installed, all storm water scours across the surface at grade.

#### 3.0 Proposed Conditions

#### 3.1 Project Description

The development consists of a proposed 2 story dwelling, 5 Units, 1 garage and commercial level, and landscaped areas. The total proposed development roof will have an area of 4,677.02 S.F, the unconnected impervious will have an area of 1181.78 S.F. and the remaining landscaped portion will have a footprint of 3,116.20 S.F.

#### 3.2 Storm Water Runoff

HydroCAD was used to model the site for the existing and proposed conditions for the 2-year, 10-year, 25-year, and 100-year type III storm events based on Atlas-14 Rain information for Middlesex County Central Area. HydroCAD calculations can be seen in Appendix A. The following table shows a summary of the existing and proposed conditions on the site as they relate to flowrate and volume of storm water runoff for each of the storm events.

#### 3.3 Infiltration system

An infiltration system was proposed to control the runoff rate from the post construction site. This system consists of a total of 10-Stormtech plastic chambers with 0.5 ft crushed stone below and a crush stone system around the Stormtech.

	Summary Table				
	Runoff F	low Rate	Volume of	f Runoff	
	EXISTING	PROPOSED	EXISTING	PROPOSED	
2-Year Storm	0.28 cfs	0.00 cfs	1,006 cfs	31 cfs	
10-Year Storm	0.50 cfs	0.04 cfs	1,850 cfs	181 cfs	
25-Year Storm	0.69 cfs	0.09 cfs	2,452 cfs	320 cfs	
100-Year Storm	1.0 cfs	0.18 cfs	3,454 cfs	579 cfs	

#### 4.0 Soil Information

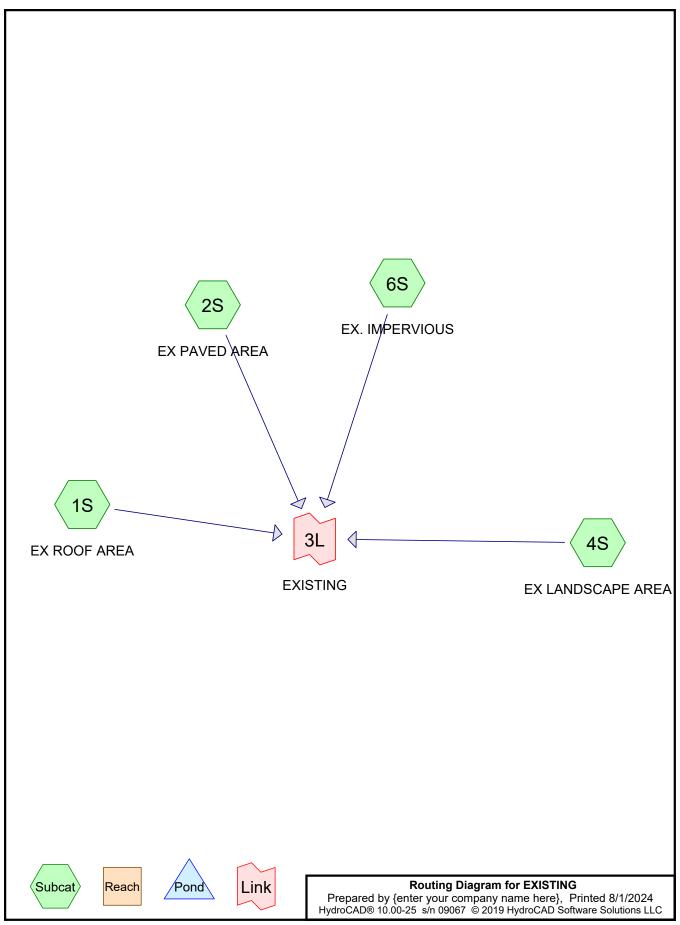
The NRCS Web Soil Survey shows two Map Units inside our area of interest. These are listed next and the percentages of Area of Interest in the Map unit Legend Table:

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
602	Urban land	0.1	38.2%		
629C	Canton-Charlton-Urban land complex, 3 to 15 percent slopes	0.2	61.8%		
Totals for Area of Interest		0.3	100.0%		

Unit 602 and 629C shows Rock outcrop, Ledges, Sandy loam, and similar soils: 602 Shows no soil hydrological group and 629c Shows hydrological group A. however based on the test pit performed on the site, fill, silt load and ledge was found which don't have hydrological group and these properties were used on the HydroCAD model.

This information is shown in Appendix B, in the Map unit descriptions.

### **Appendix A – HydroCAD Calculations**



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#### **Area Listing (all nodes)**

		CN	Description
(SC	-ft)		(subcatchment-numbers)
5,	194	49	50-75% Grass cover, Fair, HSG A (4S)
1,6	35	98	Paved parking, HSG A (2S)
2,0	040	98	Roofs, HSG A (1S)
•	106	98	Unconnected pavement, HSG A (6S)
8,8	975	70	TOTAL AREA

#### **EXISTING**

Prepared by {enter your company name here}
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#### Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
8,975	HSG A	1S, 2S, 4S, 6S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
8,975		<b>TOTAL AREA</b>

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> Sub Nur

#### **Ground Covers (all nodes)**

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
5,194	0	0	0	0	5,194	50-75% Grass cover, Fair
1,635	0	0	0	0	1,635	Paved parking
2,040	0	0	0	0	2,040	Roofs
106	0	0	0	0	106	Unconnected pavement
8,975	0	0	0	0	8,975	<b>TOTAL AREA</b>

#### **EXISTING**

Type III 24-hr 2-Year Rainfall=3.26"

Prepared by {enter your company name here}
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Page 5

Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=3.03"

Tc=5.0 min CN=98 Runoff=0.15 cfs 515 cf

Subcatchment 2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=3.03"

Tc=5.0 min CN=98 Runoff=0.12 cfs 412 cf

**Subcatchment 4S: EX LANDSCAPE AREA** Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=0.12"

Tc=5.0 min CN=49 Runoff=0.00 cfs 52 cf

Subcatchment 6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=3.03"

Tc=5.0 min CN=98 Runoff=0.01 cfs 27 cf

Link 3L: EXISTING Inflow=0.28 cfs 1,006 cf

Primary=0.28 cfs 1,006 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,006 cf Average Runoff Depth = 1.34" 57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

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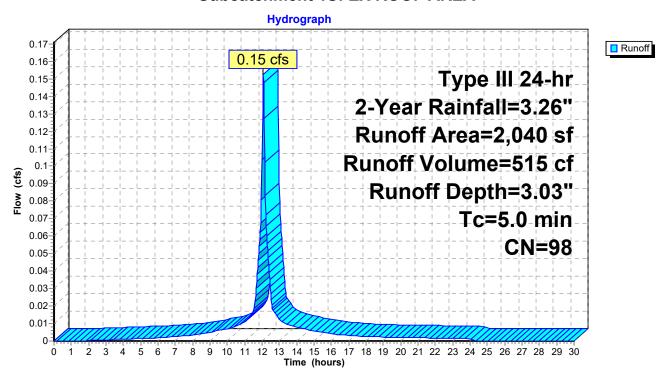
#### **Summary for Subcatchment 1S: EX ROOF AREA**

Runoff = 0.15 cfs @ 12.07 hrs, Volume= 515 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

	Area (sf)	CN I	Description					
	2,040	98 I	Roofs, HSG A					
	2,040		100.00% Impervious Area					
T (min)	c Length	Slope (ft/ft)	,	Capacity (cfs)	Description			
5	.0				Direct Entry,			

#### **Subcatchment 1S: EX ROOF AREA**



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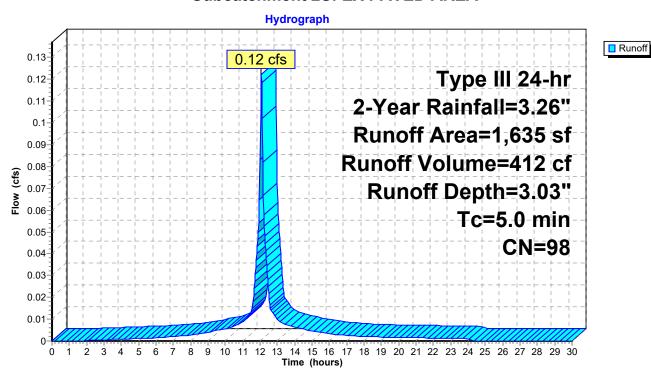
#### **Summary for Subcatchment 2S: EX PAVED AREA**

Runoff = 0.12 cfs @ 12.07 hrs, Volume= 412 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

_	Α	rea (sf)	CN I	Description					
		1,635	98	Paved parking, HSG A					
		1,635		100.00% Impervious Area					
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	·			
	5.0					Direct Entry,			

#### Subcatchment 2S: EX PAVED AREA



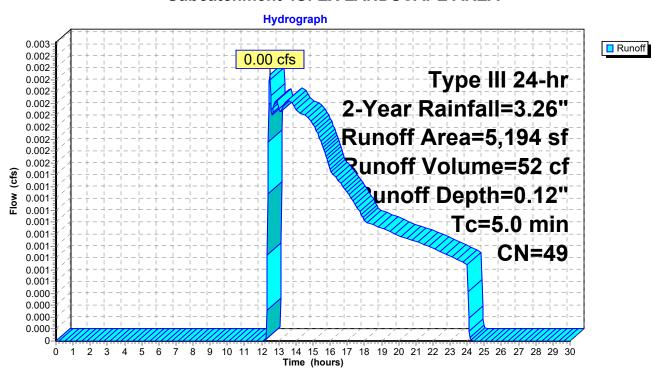
#### **Summary for Subcatchment 4S: EX LANDSCAPE AREA**

Runoff = 0.00 cfs @ 12.48 hrs, Volume= 52 cf, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

A	rea (sf)	CN E	Description					
	5,194	49 5	50-75% Grass cover, Fair, HSG A					
	5,194	1	100.00% Pervious Area					
Тс	Length	Slope	Velocity	Capacity	/ Description			
(min)	(feet)	(ft/ft)	(t) (ft/sec) (cfs)					
5.0					Direct Entry,			

#### **Subcatchment 4S: EX LANDSCAPE AREA**



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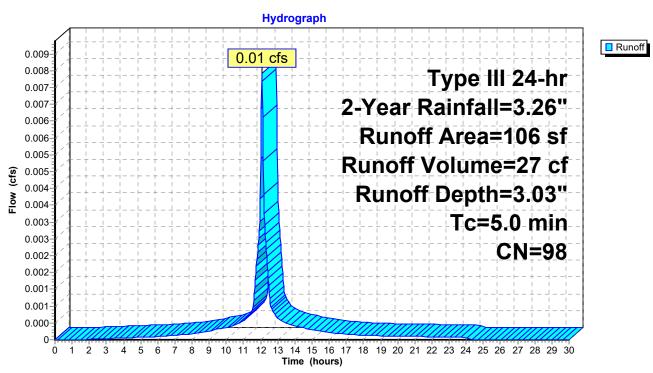
#### **Summary for Subcatchment 6S: EX. IMPERVIOUS**

Runoff = 0.01 cfs @ 12.07 hrs, Volume= 27 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

A	rea (sf)	CN E	N Description					
	106	98 L	Unconnected pavement, HSG A					
	106	1	100.00% Impervious Area					
	106	1	100.00% Unconnected					
Т-	ما المحمد ا	Clana	\/alaaits/	Conneitu	Description			
Tc	Length	Slope	•	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
5.0	•				Direct Entry,			

#### Subcatchment 6S: EX. IMPERVIOUS



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#### **Summary for Link 3L: EXISTING**

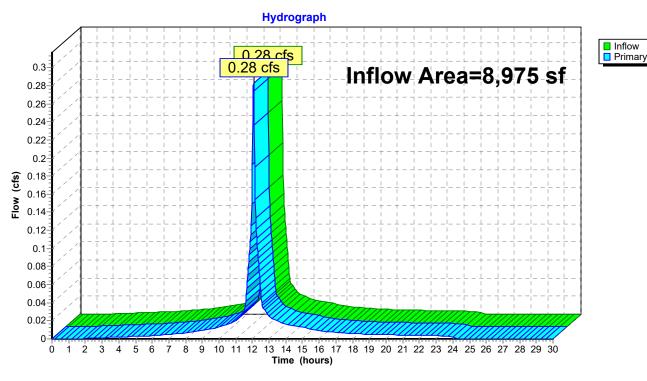
Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 1.34" for 2-Year event

Inflow = 0.28 cfs @ 12.07 hrs, Volume= 1,006 cf

Primary = 0.28 cfs @ 12.07 hrs, Volume= 1,006 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: EXISTING



**EXISTING** 

Type III 24-hr 10-Year Rainfall=5.15"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=4.91"

Tc=5.0 min CN=98 Runoff=0.24 cfs 835 cf

Subcatchment 2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=4.91"

Tc=5.0 min CN=98 Runoff=0.19 cfs 669 cf

**Subcatchment 4S: EX LANDSCAPE AREA** Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=0.70"

Tc=5.0 min CN=49 Runoff=0.06 cfs 302 cf

Subcatchment 6S: EX. IMPERVIOUS Runoff Area = 106 sf 100.00% Impervious Runoff Depth = 4.91"

Tc=5.0 min CN=98 Runoff=0.01 cfs 43 cf

Link 3L: EXISTING Inflow=0.50 cfs 1,850 cf

Primary=0.50 cfs 1,850 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,850 cf Average Runoff Depth = 2.47" 57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf HydroCAD® 10.00-25 s/n 09067 © 2019 HydroCAD Software Solutions LLC

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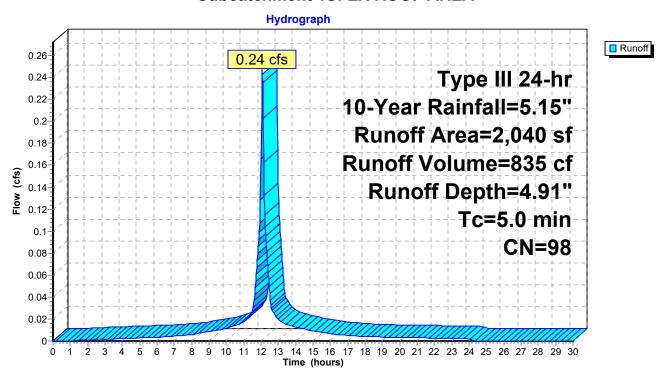
# **Summary for Subcatchment 1S: EX ROOF AREA**

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 835 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

_	Α	rea (sf)	CN	Description						
		2,040	98	Roofs, HSG A						
		2,040		100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	5.0					Direct Entry,				

#### Subcatchment 1S: EX ROOF AREA



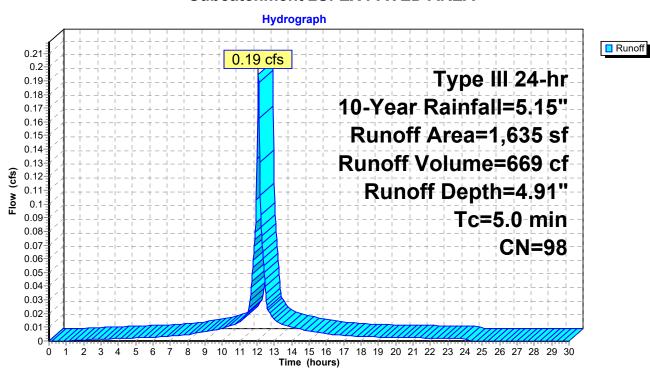
### **Summary for Subcatchment 2S: EX PAVED AREA**

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 669 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

_	Α	rea (sf)	CN I	Description						
		1,635	98 I	Paved parking, HSG A						
		1,635		100.00% Impervious Area						
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	·				
	5.0					Direct Entry,				

#### **Subcatchment 2S: EX PAVED AREA**



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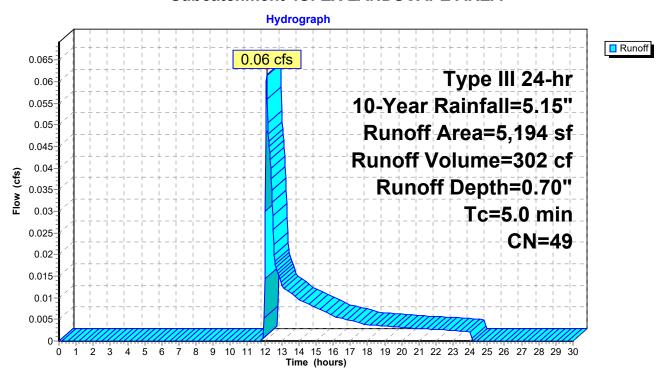
# **Summary for Subcatchment 4S: EX LANDSCAPE AREA**

Runoff = 0.06 cfs @ 12.11 hrs, Volume= 302 cf, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

	Area (sf)	CN [	Description						
	5,194	49 5	50-75% Grass cover, Fair, HSG A						
	5,194	,	100.00% Pervious Area						
To (min)	J	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•				
5.0			Direct Entry,						

#### **Subcatchment 4S: EX LANDSCAPE AREA**



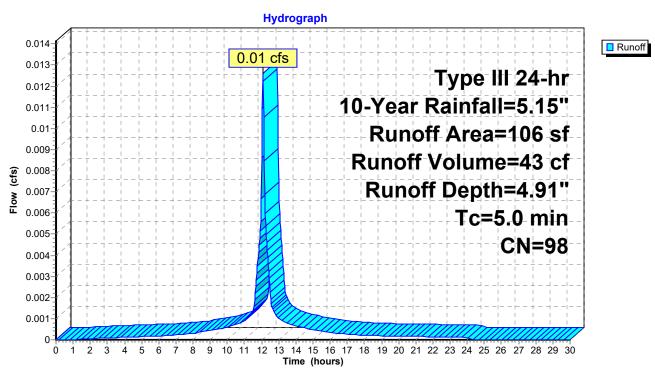
# **Summary for Subcatchment 6S: EX. IMPERVIOUS**

Runoff = 0.01 cfs @ 12.07 hrs, Volume= 43 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

A	rea (sf)	CN [	Description							
	106	98 l	Unconnected pavement, HSG A							
	106	1	100.00% Impervious Area							
	106	1	100.00% Unconnected							
Tc	Length	Slope	Velocity	Capacity	Description					
(min)	(feet)	(ft/ft)	/ft) (ft/sec) (cfs)							
5.0					Direct Entry,					

### Subcatchment 6S: EX. IMPERVIOUS



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# **Summary for Link 3L: EXISTING**

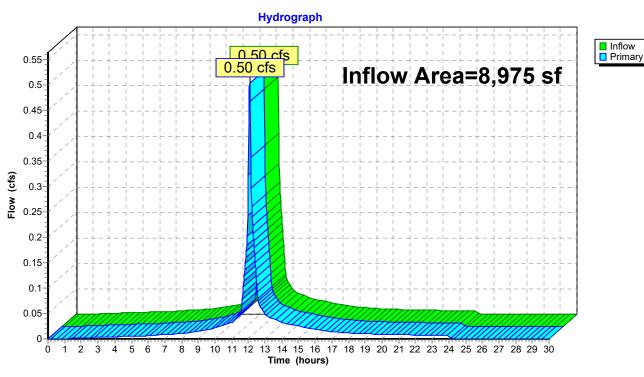
Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 2.47" for 10-Year event

Inflow = 0.50 cfs @ 12.08 hrs, Volume= 1,850 cf

Primary = 0.50 cfs @ 12.08 hrs, Volume= 1,850 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: EXISTING



**EXISTING** 

Type III 24-hr 25-Year Rainfall=6.33"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=6.09"

Tc=5.0 min CN=98 Runoff=0.30 cfs 1,036 cf

Subcatchment 2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=6.09"

Tc=5.0 min CN=98 Runoff=0.24 cfs 830 cf

Subcatchment 4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=1.23"

Tc=5.0 min CN=49 Runoff=0.14 cfs 533 cf

Subcatchment 6S: EX. IMPERVIOUS Runoff Area = 106 sf 100.00% Impervious Runoff Depth = 6.09"

Tc=5.0 min CN=98 Runoff=0.02 cfs 54 cf

Link 3L: EXISTING Inflow=0.69 cfs 2,452 cf

Primary=0.69 cfs 2,452 cf

Total Runoff Area = 8,975 sf Runoff Volume = 2,452 cf Average Runoff Depth = 3.28" 57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf HydroCAD® 10.00-25 s/n 09067 © 2019 HydroCAD Software Solutions LLC

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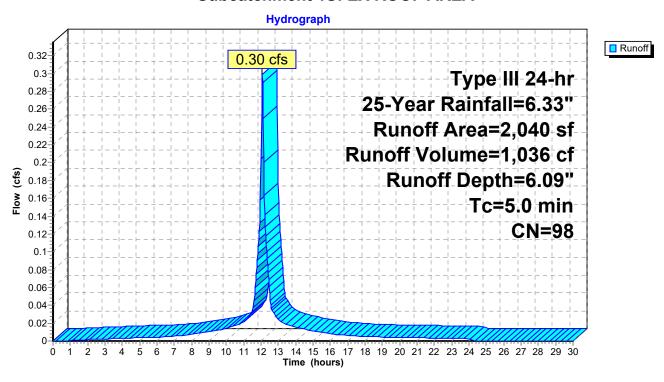
# **Summary for Subcatchment 1S: EX ROOF AREA**

Runoff = 0.30 cfs @ 12.07 hrs, Volume= 1,036 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

_	Α	rea (sf)	CN	Description						
		2,040	98	Roofs, HSG A						
		2,040		100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	5.0					Direct Entry,				

#### **Subcatchment 1S: EX ROOF AREA**



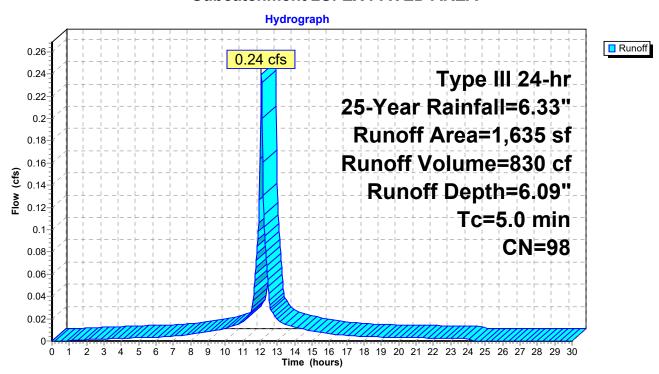
# **Summary for Subcatchment 2S: EX PAVED AREA**

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 830 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

A	rea (sf)	CN E	Description						
	1,635	98 F	Paved parking, HSG A						
	1,635	1	100.00% Impervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	pe Velocity Capacity Description  ft) (ft/sec) (cfs)						
5.0					Direct Entry,				

#### Subcatchment 2S: EX PAVED AREA



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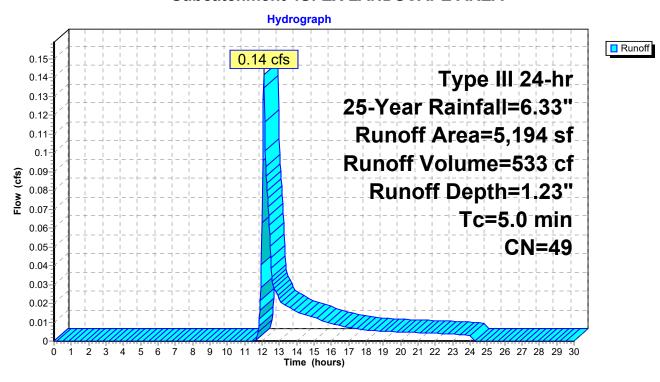
# **Summary for Subcatchment 4S: EX LANDSCAPE AREA**

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 533 cf, Depth= 1.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

A	rea (sf)	CN [	Description						
	5,194	49 5	50-75% Grass cover, Fair, HSG A						
	5,194	1	100.00% Pervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
5.0					Direct Entry,				

#### **Subcatchment 4S: EX LANDSCAPE AREA**



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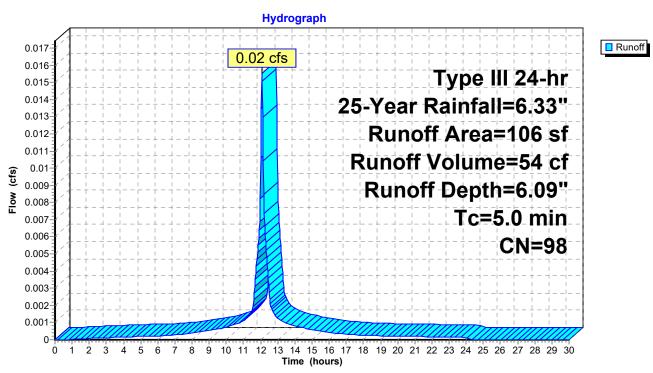
# **Summary for Subcatchment 6S: EX. IMPERVIOUS**

Runoff = 0.02 cfs @ 12.07 hrs, Volume= 54 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

A	rea (sf)	CN [	Description							
	106	98 l	Unconnected pavement, HSG A							
	106	1	100.00% Impervious Area							
	106	1	100.00% Unconnected							
Tc	Length	Slope	Velocity	Capacity	Description					
(min)	(feet)	(ft/ft)	/ft) (ft/sec) (cfs)							
5.0					Direct Entry,					

### Subcatchment 6S: EX. IMPERVIOUS



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### **Summary for Link 3L: EXISTING**

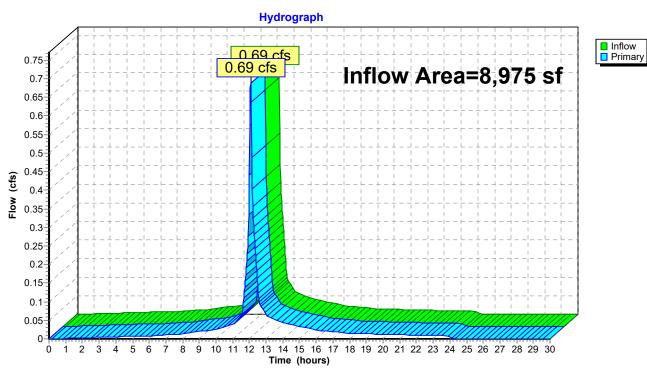
Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 3.28" for 25-Year event

Inflow = 0.69 cfs @ 12.08 hrs, Volume= 2,452 cf

Primary = 0.69 cfs @ 12.08 hrs, Volume= 2,452 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: EXISTING



Type III 24-hr 100-Year Rainfall=8.14"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EX ROOF AREA Runoff Area=2,040 sf 100.00% Impervious Runoff Depth=7.90"

Tc=5.0 min CN=98 Runoff=0.39 cfs 1,343 cf

Subcatchment 2S: EX PAVED AREA Runoff Area=1,635 sf 100.00% Impervious Runoff Depth=7.90"

Tc=5.0 min CN=98 Runoff=0.31 cfs 1,076 cf

Subcatchment 4S: EX LANDSCAPE AREA Runoff Area=5,194 sf 0.00% Impervious Runoff Depth=2.23"

Tc=5.0 min CN=49 Runoff=0.29 cfs 965 cf

Subcatchment 6S: EX. IMPERVIOUS Runoff Area=106 sf 100.00% Impervious Runoff Depth=7.90"

Tc=5.0 min CN=98 Runoff=0.02 cfs 70 cf

Link 3L: EXISTING Inflow=1.00 cfs 3,454 cf

Primary=1.00 cfs 3,454 cf

Total Runoff Area = 8,975 sf Runoff Volume = 3,454 cf Average Runoff Depth = 4.62" 57.87% Pervious = 5,194 sf 42.13% Impervious = 3,781 sf

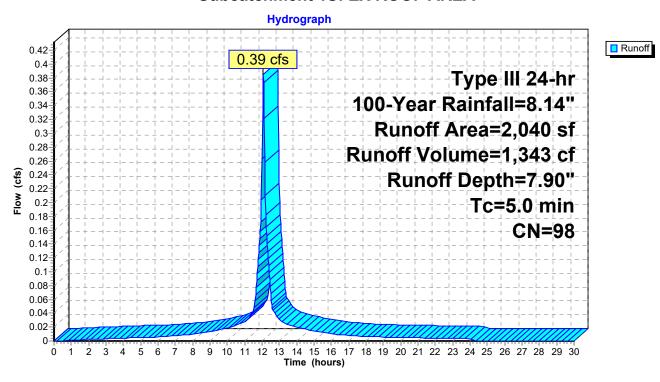
# **Summary for Subcatchment 1S: EX ROOF AREA**

Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,343 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

_	Α	rea (sf)	CN	Description						
		2,040	98	Roofs, HSG A						
		2,040		100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	5.0					Direct Entry,				

#### Subcatchment 1S: EX ROOF AREA



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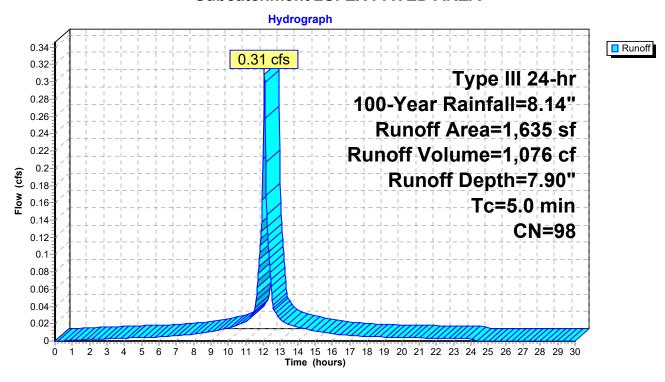
### **Summary for Subcatchment 2S: EX PAVED AREA**

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 1,076 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

_	Α	rea (sf)	CN I	Description						
		1,635	98 I	Paved parking, HSG A						
		1,635		100.00% Impervious Area						
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	·				
	5.0					Direct Entry,				

#### **Subcatchment 2S: EX PAVED AREA**



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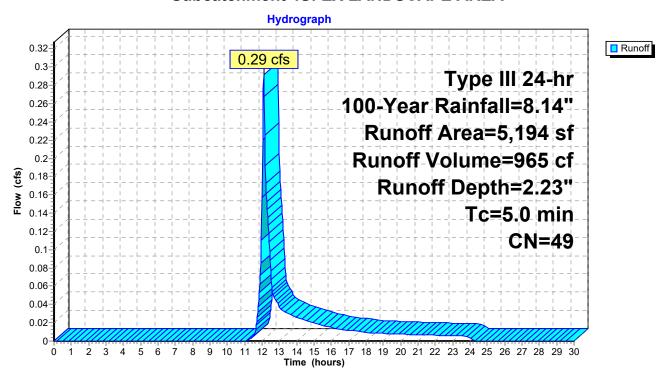
# **Summary for Subcatchment 4S: EX LANDSCAPE AREA**

Runoff = 0.29 cfs @ 12.09 hrs, Volume= 965 cf, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

A	rea (sf)	CN [	Description						
	5,194	49 5	50-75% Grass cover, Fair, HSG A						
	5,194	1	100.00% Pervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
5.0					Direct Entry,				

#### **Subcatchment 4S: EX LANDSCAPE AREA**



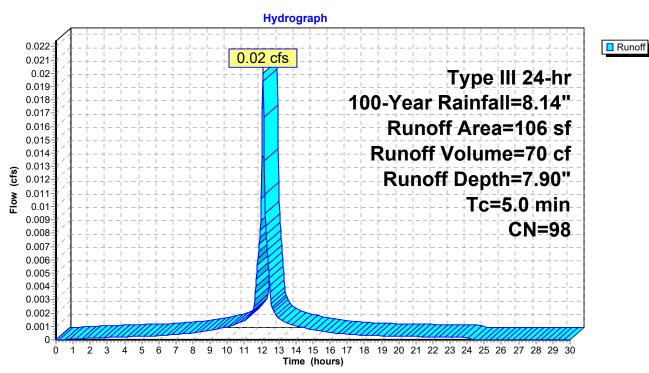
### **Summary for Subcatchment 6S: EX. IMPERVIOUS**

Runoff = 0.02 cfs @ 12.07 hrs, Volume= 70 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

A	rea (sf)	CN [	Description							
	106	98 l	Unconnected pavement, HSG A							
	106	1	100.00% Impervious Area							
	106	1	100.00% Unconnected							
Tc	Length	Slope	Velocity	Capacity	Description					
(min)	(feet)	(ft/ft)	/ft) (ft/sec) (cfs)							
5.0					Direct Entry,					

### Subcatchment 6S: EX. IMPERVIOUS



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### **Summary for Link 3L: EXISTING**

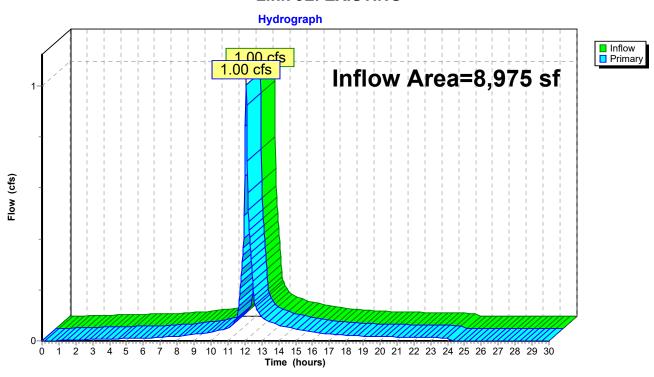
Inflow Area = 8,975 sf, 42.13% Impervious, Inflow Depth = 4.62" for 100-Year event

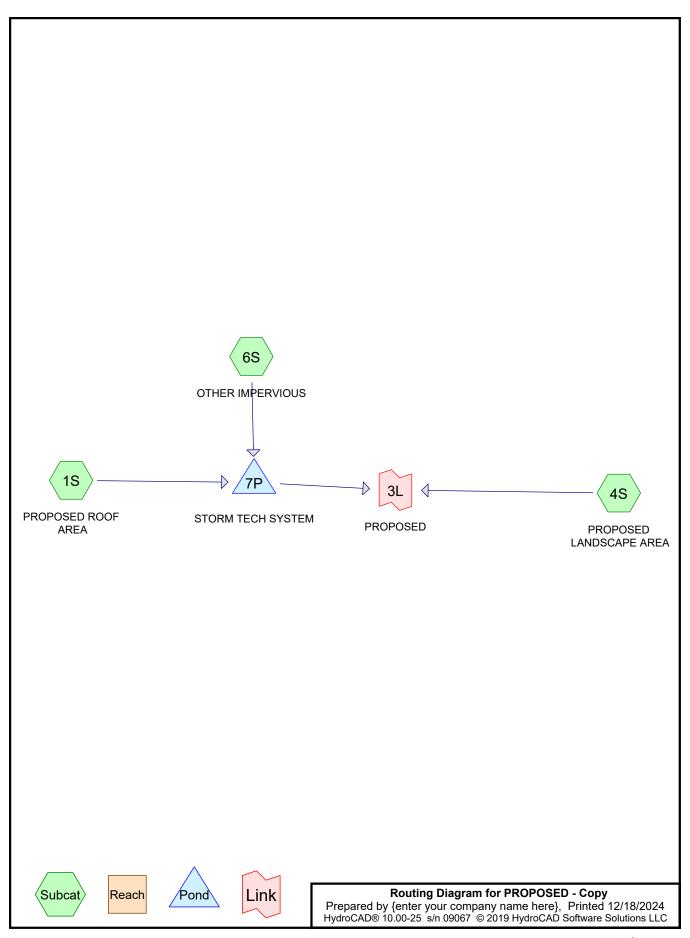
Inflow = 1.00 cfs @ 12.07 hrs, Volume= 3,454 cf

Primary = 1.00 cfs @ 12.07 hrs, Volume= 3,454 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: EXISTING





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### **Area Listing (all nodes)**

A	rea (	CN	Description
(se	q-ft)		(subcatchment-numbers)
3,	116	49	50-75% Grass cover, Fair, HSG A (4S)
4,	677	98	Roofs, HSG A (1S)
1,	182	98	Unconnected pavement, HSG A (6S)
8,	975	81	TOTAL AREA

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### Soil Listing (all nodes)

Area	Soil	Subcatchment
(sq-ft)	Group	Numbers
8,975	HSG A	1S, 4S, 6S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
8,975		TOTAL AREA

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> Sub Nur

### **Ground Covers (all nodes)**

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
3,116	0	0	0	0	3,116	50-75% Grass cover, Fair
4,677	0	0	0	0	4,677	Roofs
1,182	0	0	0	0	1,182	Unconnected pavement
8,975	0	0	0	0	8,975	<b>TOTAL AREA</b>

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Type III 24-hr 2-Year Rainfall=3.26"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPOSED ROOF Runoff Area=4,677 sf 100.00% Impervious Runoff Depth=3.03"

Tc=5.0 min CN=98 Runoff=0.35 cfs 1,180 cf

Subcatchment 4S: PROPOSED LANDSCAPE Runoff Area=3,116 sf 0.00% Impervious Runoff Depth=0.12"

Tc=5.0 min CN=49 Runoff=0.00 cfs 31 cf

Subcatchment 6S: OTHER IMPERVIOUS Runoff Area=1,182 sf 100.00% Impervious Runoff Depth=3.03"

Tc=5.0 min CN=98 Runoff=0.09 cfs 298 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=167.28' Storage=648 cf Inflow=0.44 cfs 1,478 cf

Discarded=0.02 cfs 1,478 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 1,478 cf

Link 3L: PROPOSED Inflow=0.00 cfs 31 cf

Primary=0.00 cfs 31 cf

Total Runoff Area = 8,975 sf Runoff Volume = 1,509 cf Average Runoff Depth = 2.02" 34.72% Pervious = 3,116 sf 65.28% Impervious = 5,859 sf

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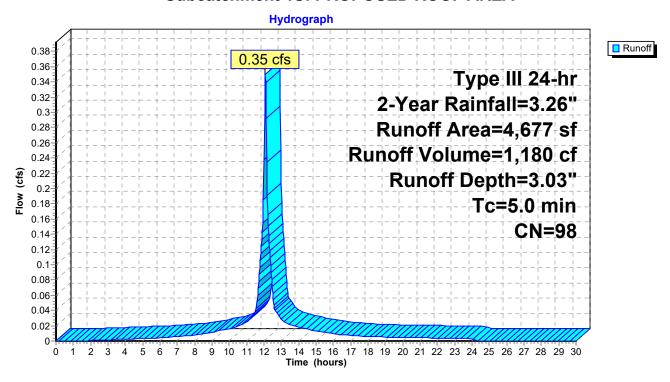
# **Summary for Subcatchment 1S: PROPOSED ROOF AREA**

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,180 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

	Area (sf)	CN I	Description					
	4,677	98	Roofs, HSG A					
	4,677		100.00% Impervious Area					
٦ mi)	c Length	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
5	.0				Direct Entry,			

#### **Subcatchment 1S: PROPOSED ROOF AREA**



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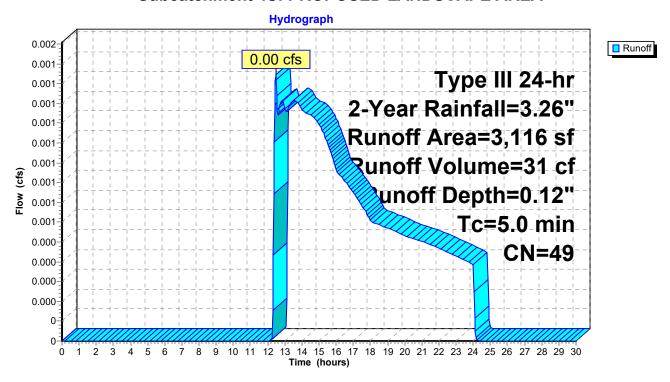
# **Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA**

Runoff = 0.00 cfs @ 12.48 hrs, Volume= 31 cf, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

	Area (sf)	CN [	Description					
	3,116	49 5	50-75% Grass cover, Fair, HSG A					
	3,116	1	100.00% Pervious Area					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•			
5.0					Direct Entry,			

#### **Subcatchment 4S: PROPOSED LANDSCAPE AREA**



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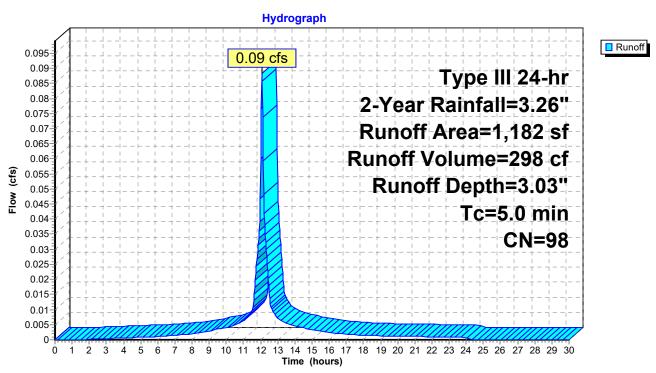
### **Summary for Subcatchment 6S: OTHER IMPERVIOUS**

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 298 cf, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 2-Year Rainfall=3.26"

_	Α	rea (sf)	CN [	Description						
		1,182	98 l	Unconnected pavement, HSG A						
		1,182	•	100.00% Impervious Area						
		1,182	•	100.00% Unconnected						
	To	Longth	Slope	Vologity	Conocity	Description				
		Length	Slope	,	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry.				

#### Subcatchment 6S: OTHER IMPERVIOUS



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### **Summary for Pond 7P: STORM TECH SYSTEM**

Inflow Area = 5,859 sf,100.00% Impervious, Inflow Depth = 3.03" for 2-Year event
Inflow = 0.44 cfs @ 12.07 hrs, Volume= 1,478 cf
Outflow = 0.02 cfs @ 10.62 hrs, Volume= 1,478 cf, Atten= 94%, Lag= 0.0 min
Discarded = 0.00 cfs @ 10.62 hrs, Volume= 1,478 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Peak Elev= 167.28' @ 13.83 hrs Surf.Area= 1,022 sf Storage= 648 cf

Plug-Flow detention time= 221.8 min calculated for 1,477 cf (100% of inflow) Center-of-Mass det. time= 221.7 min (976.8 - 755.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	510 cf	16.25'W x 32.10'L x 3.50'H Field A
			1,825 cf Overall - 551 cf Embedded = 1,274 cf x 40.0% Voids
#2A	166.90'	551 cf	ADS_StormTech SC-740 +Cap x 12 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			12 Chambers in 3 Rows
#3	166.50'	1,450 cf	Custom Stage Data (Prismatic)Listed below (Recalc)
	-		

2,511 cf Total Available Storage

#### Storage Group A created with Chamber Wizard

=levation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
166.50	500	0	0
169.40	500	1,450	1,450
	166.50	(feet)         (sq-ft)           166.50         500	(feet)         (sq-ft)         (cubic-feet)           166.50         500         0

Device	Routing	Invert	Outlet Devices
#1 #2	Discarded Primary	17717	1.020 in/hr Exfiltration over Surface area 6.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.02 cfs @ 10.62 hrs HW=166.50' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge) 2=Orifice/Grate ( Controls 0.00 cfs)

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#### Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

#### Chamber Model = ADS\_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

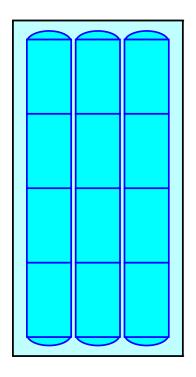
3 Rows x 51.0" Wide + 5.0" Spacing x 2 + 16.0" Side Stone x 2 = 16.25' Base Width 6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

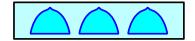
12 Chambers x 45.9 cf = 551.3 cf Chamber Storage

1,825.5 cf Field - 551.3 cf Chambers = 1,274.2 cf Stone x 40.0% Voids = 509.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,061.0 cf = 0.024 af Overall Storage Efficiency = 58.1% Overall System Size = 32.10' x 16.25' x 3.50'

12 Chambers 67.6 cy Field 47.2 cy Stone

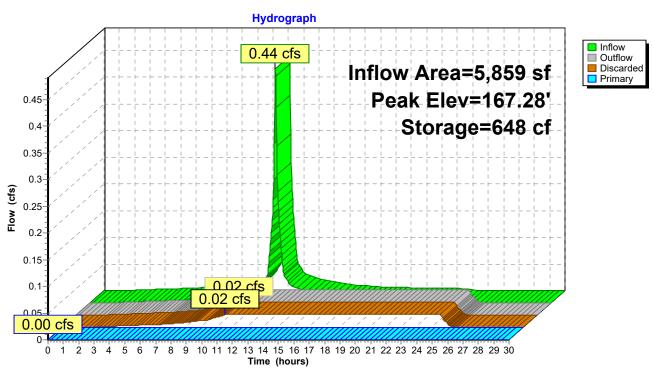




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### **Pond 7P: STORM TECH SYSTEM**



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### **Summary for Link 3L: PROPOSED**

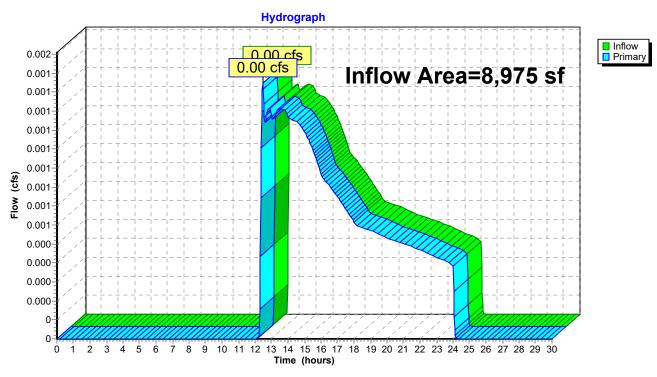
Inflow Area = 8,975 sf, 65.28% Impervious, Inflow Depth = 0.04" for 2-Year event

Inflow = 0.00 cfs @ 12.48 hrs, Volume= 31 cf

Primary = 0.00 cfs @ 12.48 hrs, Volume= 31 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: PROPOSED



**PROPOSED - Copy** 

Type III 24-hr 10-Year Rainfall=5.15"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPOSED ROOF Runoff Area=4,677 sf 100.00% Impervious Runoff Depth=4.91"

Tc=5.0 min CN=98 Runoff=0.56 cfs 1,915 cf

Subcatchment 4S: PROPOSED LANDSCAPE Runoff Area=3,116 sf 0.00% Impervious Runoff Depth=0.70"

Tc=5.0 min CN=49 Runoff=0.04 cfs 181 cf

Subcatchment 6S: OTHER IMPERVIOUS Runoff Area=1,182 sf 100.00% Impervious Runoff Depth=4.91"

Subcatchment 6S: OTHER IMPERVIOUS Runoff Area=1,182 sf 100.00% Impervious Runoff Depth=4.91" Tc=5.0 min CN=98 Runoff=0.14 cfs 484 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=167.98' Storage=1,264 cf Inflow=0.70 cfs 2,399 cf

Discarded=0.02 cfs 2,067 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 2,067 cf

34.72% Pervious = 3.116 sf 65.28% Impervious = 5.859 sf

Link 3L: PROPOSED Inflow=0.04 cfs 181 cf
Primary=0.04 cfs 181 cf

Total Runoff Area = 8,975 sf Runoff Volume = 2,580 cf Average Runoff Depth = 3.45"

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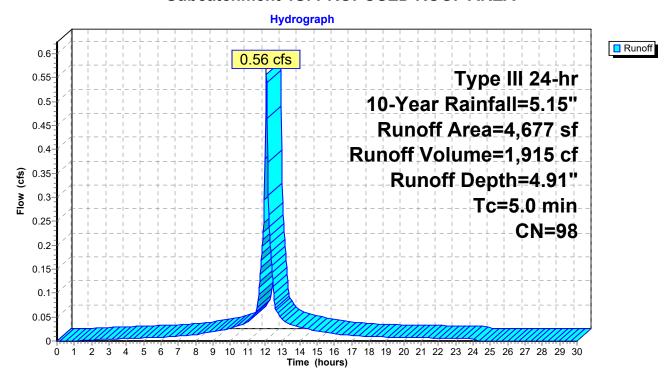
# **Summary for Subcatchment 1S: PROPOSED ROOF AREA**

Runoff = 0.56 cfs @ 12.07 hrs, Volume= 1,915 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

 Α	rea (sf)	CN	Description					
	4,677	98	Roofs, HSG A					
	4,677		100.00% Impervious Area					
 Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
5.0					Direct Entry,			

#### **Subcatchment 1S: PROPOSED ROOF AREA**



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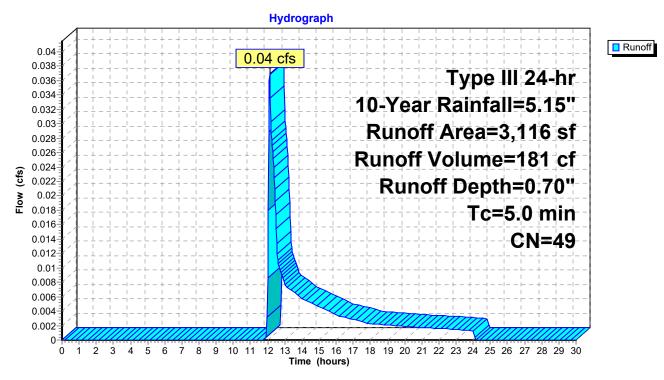
# **Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA**

Runoff = 0.04 cfs @ 12.11 hrs, Volume= 181 cf, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

	rea (sf)	CN E	Description					
	3,116	49 5	50-75% Grass cover, Fair, HSG A					
	3,116	1	100.00% Pervious Area					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)				
5.0	·	·			Direct Entry,			

#### **Subcatchment 4S: PROPOSED LANDSCAPE AREA**



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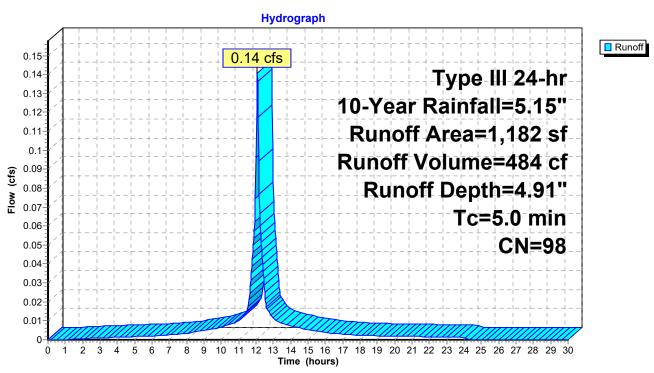
# **Summary for Subcatchment 6S: OTHER IMPERVIOUS**

Runoff = 0.14 cfs @ 12.07 hrs, Volume= 484 cf, Depth= 4.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 10-Year Rainfall=5.15"

A	rea (sf)	CN [	Description					
	1,182	98 l	Jnconnecte	ed pavemer	nt, HSG A			
	1,182 1,182		100.00% Impervious Area 100.00% Unconnected					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
5.0			•	, ,	Direct Entry,			

#### Subcatchment 6S: OTHER IMPERVIOUS



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### **Summary for Pond 7P: STORM TECH SYSTEM**

5,859 sf,100.00% Impervious, Inflow Depth = 4.91" for 10-Year event Inflow Area = Inflow 0.70 cfs @ 12.07 hrs, Volume= 2.399 cf 0.02 cfs @ 9.15 hrs, Volume= 2,067 cf, Atten= 97%, Lag= 0.0 min Outflow 9.15 hrs, Volume= Discarded = 2.067 cf 0.02 cfs @ Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Peak Elev= 167.98' @ 15.33 hrs Surf.Area= 1,022 sf Storage= 1,264 cf

Plug-Flow detention time= 393.4 min calculated for 2,065 cf (86% of inflow) Center-of-Mass det. time= 331.8 min (1,078.4 - 746.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	510 cf	16.25'W x 32.10'L x 3.50'H Field A
			1,825 cf Overall - 551 cf Embedded = 1,274 cf x 40.0% Voids
#2A	166.90'	551 cf	ADS_StormTech SC-740 +Cap x 12 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			12 Chambers in 3 Rows
#3	166.50'	1,450 cf	Custom Stage Data (Prismatic)Listed below (Recalc)

2,511 cf Total Available Storage

#### Storage Group A created with Chamber Wizard

Elevation	Surf.Area	Inc.Store	Cum.Store	
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)	
166.50	500	0	0	
169.40	500	1,450	1.450	

Device	Routing	Invert	Outlet Devices		
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area		
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600		
			Limited to weir flow at low heads		

**Discarded OutFlow** Max=0.02 cfs @ 9.15 hrs HW=166.50' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge) 2=Orifice/Grate ( Controls 0.00 cfs)

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#### Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

Chamber Model = ADS\_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

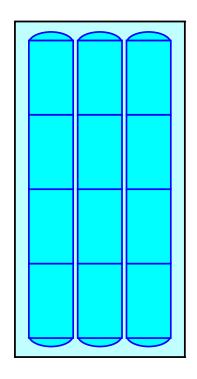
3 Rows x 51.0" Wide + 5.0" Spacing x 2 + 16.0" Side Stone x 2 = 16.25' Base Width 6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

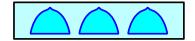
12 Chambers x 45.9 cf = 551.3 cf Chamber Storage

1,825.5 cf Field - 551.3 cf Chambers = 1,274.2 cf Stone x 40.0% Voids = 509.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,061.0 cf = 0.024 af Overall Storage Efficiency = 58.1% Overall System Size = 32.10' x 16.25' x 3.50'

12 Chambers 67.6 cy Field 47.2 cy Stone



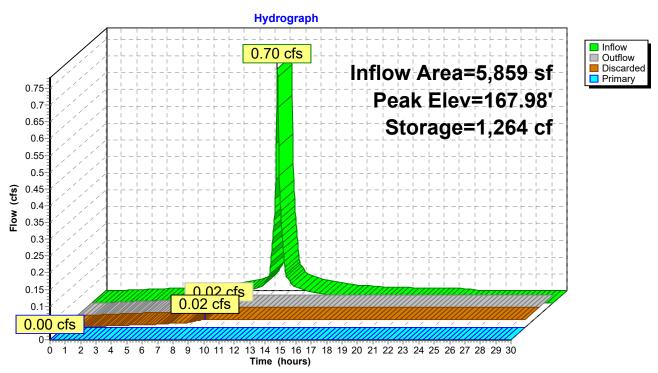


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### **Pond 7P: STORM TECH SYSTEM**



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## **Summary for Link 3L: PROPOSED**

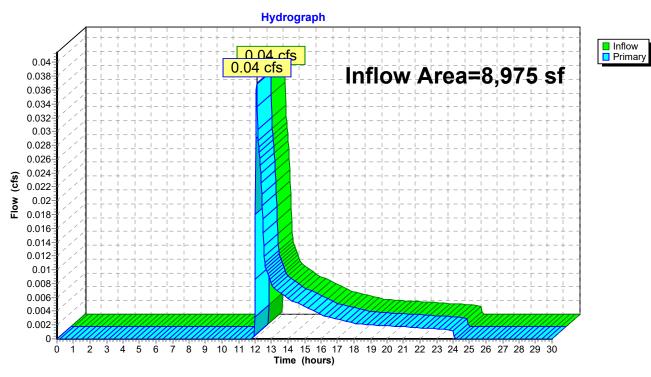
Inflow Area = 8,975 sf, 65.28% Impervious, Inflow Depth = 0.24" for 10-Year event

Inflow = 0.04 cfs @ 12.11 hrs, Volume= 181 cf

Primary = 0.04 cfs @ 12.11 hrs, Volume= 181 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: PROPOSED



**PROPOSED - Copy** 

Type III 24-hr 25-Year Rainfall=6.33"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPOSED ROOF Runoff Area=4,677 sf 100.00% Impervious Runoff Depth=6.09"

Tc=5.0 min CN=98 Runoff=0.69 cfs 2,374 cf

Subcatchment 4S: PROPOSED LANDSCAPE Runoff Area=3,116 sf 0.00% Impervious Runoff Depth=1.23"

Tc=5.0 min CN=49 Runoff=0.09 cfs 320 cf

Subcatchment 6S: OTHER IMPERVIOUS Runoff Area=1,182 sf 100.00% Impervious Runoff Depth=6.09"

Tc=5.0 min CN=98 Runoff=0.17 cfs 600 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=168.49' Storage=1,695 cf Inflow=0.86 cfs 2,974 cf

Discarded=0.02 cfs 2,139 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 2,139 cf

Link 3L: PROPOSED Inflow=0.09 cfs 320 cf

Primary=0.09 cfs 320 cf

Total Runoff Area = 8,975 sf Runoff Volume = 3,294 cf Average Runoff Depth = 4.40" 34.72% Pervious = 3,116 sf 65.28% Impervious = 5,859 sf

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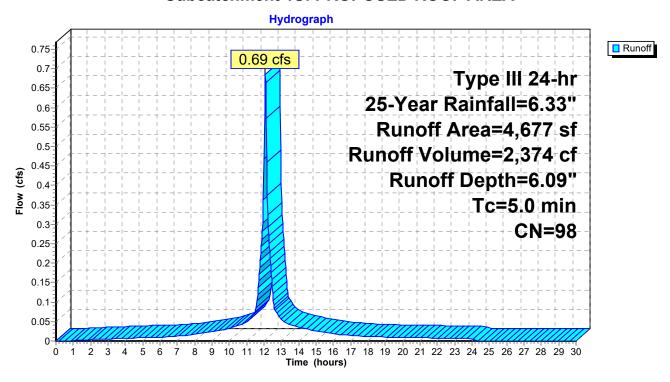
# **Summary for Subcatchment 1S: PROPOSED ROOF AREA**

Runoff = 0.69 cfs @ 12.07 hrs, Volume= 2,374 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

	Α	rea (sf)	CN	Description		
		4,677	98	Roofs, HSG	Α	
		4,677		100.00% In	npervious A	Area
(n	Tc nin)	Length (feet)	Slope (ft/ft	velocity (ft/sec)	Capacity (cfs)	Description
	5.0					Direct Entry,

#### **Subcatchment 1S: PROPOSED ROOF AREA**



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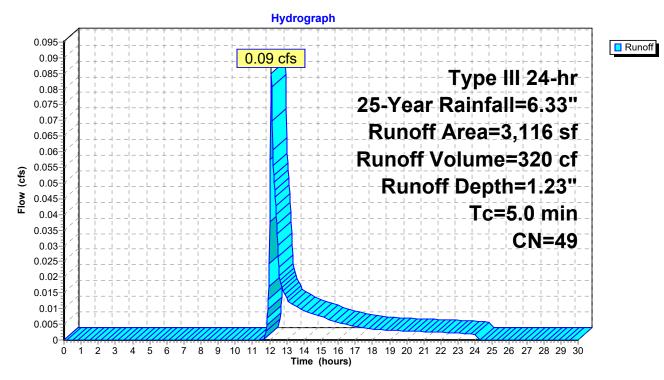
# **Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA**

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 320 cf, Depth= 1.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

	Area (sf)	CN [	Description				
	3,116	49 5	9 50-75% Grass cover, Fair, HSG A				
	3,116	1	00.00% Pe	ervious Are	ea		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•		
5.0					Direct Entry,		

#### **Subcatchment 4S: PROPOSED LANDSCAPE AREA**



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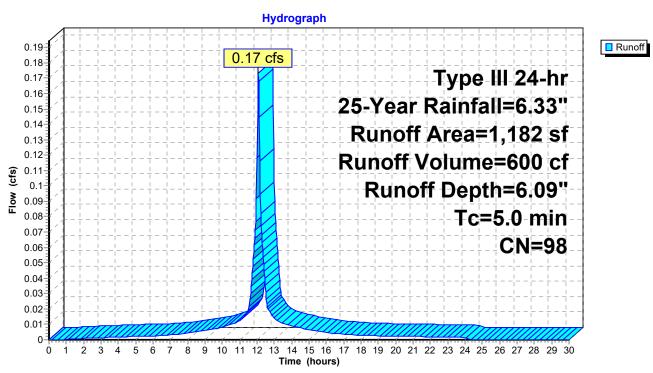
# **Summary for Subcatchment 6S: OTHER IMPERVIOUS**

Runoff = 0.17 cfs @ 12.07 hrs, Volume= 600 cf, Depth= 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 25-Year Rainfall=6.33"

A	rea (sf)	CN E	escription			
	1,182	98 L	98 Unconnected pavement, HSG A			
	1,182 1,182			npervious Anconnected		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
5.0					Direct Entry,	

#### **Subcatchment 6S: OTHER IMPERVIOUS**



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## **Summary for Pond 7P: STORM TECH SYSTEM**

5,859 sf,100.00% Impervious, Inflow Depth = 6.09" for 25-Year event Inflow Area = Inflow 0.86 cfs @ 12.07 hrs, Volume= 2.974 cf 0.02 cfs @ 8.55 hrs, Volume= Outflow 2,139 cf, Atten= 97%, Lag= 0.0 min 8.55 hrs, Volume= Discarded = 2.139 cf 0.02 cfs @ Primary 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Peak Elev= 168.49' @ 15.89 hrs Surf.Area= 1,022 sf Storage= 1,695 cf

Plug-Flow detention time= 403.0 min calculated for 2,136 cf (72% of inflow) Center-of-Mass det. time= 310.7 min (1,054.1 - 743.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	510 cf	16.25'W x 32.10'L x 3.50'H Field A
			1,825 cf Overall - 551 cf Embedded = 1,274 cf x 40.0% Voids
#2A	166.90'	551 cf	ADS_StormTech SC-740 +Cap x 12 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			12 Chambers in 3 Rows
#3	166.50'	1,450 cf	Custom Stage Data (Prismatic)Listed below (Recalc)

2,511 cf Total Available Storage

#### Storage Group A created with Chamber Wizard

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
166.50	500	0	0
169.40	500	1.450	1.450

Device	Routing	Invert	Outlet Devices	
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area	
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600	
			Limited to weir flow at low heads	

**Discarded OutFlow** Max=0.02 cfs @ 8.55 hrs HW=166.50' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge) 2=Orifice/Grate ( Controls 0.00 cfs)

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#### Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

#### Chamber Model = ADS\_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

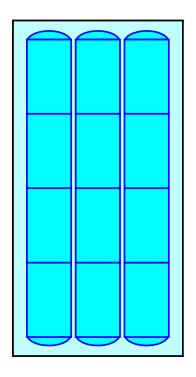
3 Rows x 51.0" Wide + 5.0" Spacing x 2 + 16.0" Side Stone x 2 = 16.25' Base Width 6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

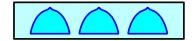
12 Chambers x 45.9 cf = 551.3 cf Chamber Storage

1,825.5 cf Field - 551.3 cf Chambers = 1,274.2 cf Stone x 40.0% Voids = 509.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,061.0 cf = 0.024 af Overall Storage Efficiency = 58.1% Overall System Size = 32.10' x 16.25' x 3.50'

12 Chambers 67.6 cy Field 47.2 cy Stone



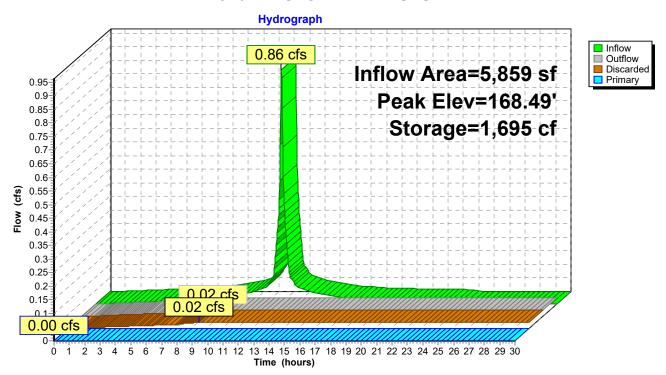


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#### **Pond 7P: STORM TECH SYSTEM**



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# **Summary for Link 3L: PROPOSED**

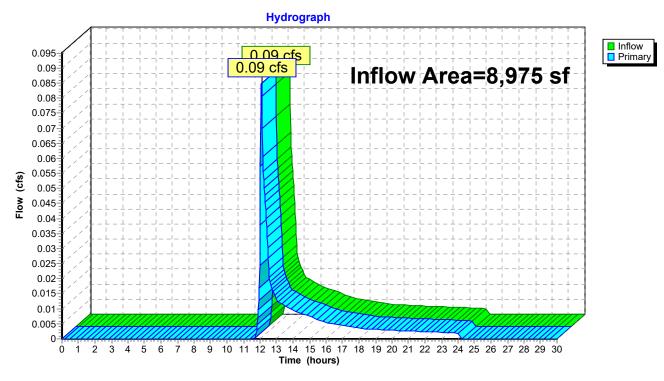
Inflow Area = 8,975 sf, 65.28% Impervious, Inflow Depth = 0.43" for 25-Year event

Inflow = 0.09 cfs @ 12.09 hrs, Volume= 320 cf

Primary = 0.09 cfs @ 12.09 hrs, Volume= 320 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: PROPOSED



**PROPOSED - Copy** 

Type III 24-hr 100-Year Rainfall=8.14"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPOSED ROOF Runoff Area=4,677 sf 100.00% Impervious Runoff Depth=7.90"

Tc=5.0 min CN=98 Runoff=0.88 cfs 3,079 cf

Subcatchment 4S: PROPOSED LANDSCAPE Runoff Area=3,116 sf 0.00% Impervious Runoff Depth=2.23"

Tc=5.0 min CN=49 Runoff=0.18 cfs 579 cf

Subcatchment 6S: OTHER IMPERVIOUS Runoff Area=1,182 sf 100.00% Impervious Runoff Depth=7.90"

Tc=5.0 min CN=98 Runoff=0.22 cfs 778 cf

Pond 7P: STORM TECH SYSTEM Peak Elev=169.38' Storage=2,389 cf Inflow=1.11 cfs 3,857 cf

Discarded=0.02 cfs 2,232 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 2,232 cf

Link 3L: PROPOSED Inflow=0.18 cfs 579 cf

Primary=0.18 cfs 579 cf

Total Runoff Area = 8,975 sf Runoff Volume = 4,436 cf Average Runoff Depth = 5.93" 34.72% Pervious = 3,116 sf 65.28% Impervious = 5,859 sf

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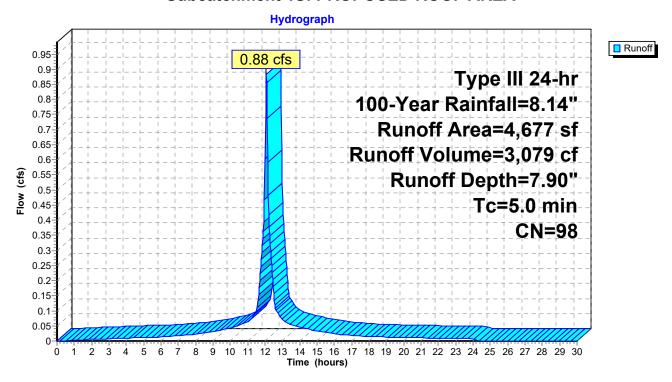
# **Summary for Subcatchment 1S: PROPOSED ROOF AREA**

Runoff = 0.88 cfs @ 12.07 hrs, Volume= 3,079 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

 Α	rea (sf)	CN	Description		
	4,677	98	Roofs, HSG	A A	
	4,677		100.00% In	npervious A	Area
 Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

#### **Subcatchment 1S: PROPOSED ROOF AREA**



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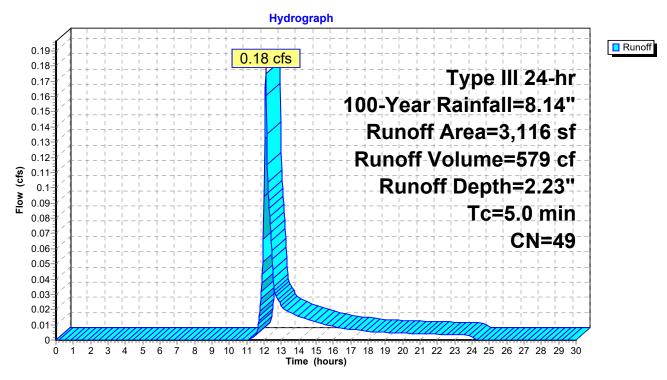
# **Summary for Subcatchment 4S: PROPOSED LANDSCAPE AREA**

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 579 cf, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

	Area (sf)	CN [	Description				
	3,116	49 5	9 50-75% Grass cover, Fair, HSG A				
	3,116	1	00.00% Pe	ervious Are	ea		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•		
5.0					Direct Entry,		

#### **Subcatchment 4S: PROPOSED LANDSCAPE AREA**



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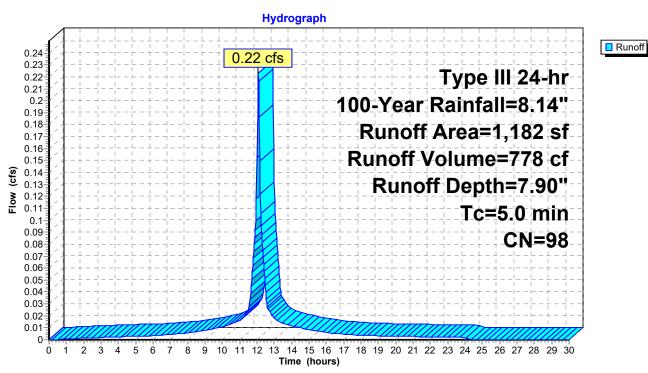
# **Summary for Subcatchment 6S: OTHER IMPERVIOUS**

Runoff = 0.22 cfs @ 12.07 hrs, Volume= 778 cf, Depth= 7.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Type III 24-hr 100-Year Rainfall=8.14"

A	rea (sf)	CN [	Description			
	1,182	98 l	Unconnected pavement, HSG A			
	1,182 1,182			npervious Anconnected		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
5.0			•	, ,	Direct Entry,	

#### **Subcatchment 6S: OTHER IMPERVIOUS**



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## **Summary for Pond 7P: STORM TECH SYSTEM**

5,859 sf,100.00% Impervious, Inflow Depth = 7.90" for 100-Year event Inflow Area = Inflow 1.11 cfs @ 12.07 hrs, Volume= 3.857 cf 0.02 cfs @ 7.62 hrs, Volume= Outflow 2,232 cf, Atten= 98%, Lag= 0.0 min 7.62 hrs, Volume= Discarded = 2,232 cf 0.02 cfs @ Primary 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs Peak Elev= 169.38' @ 16.90 hrs Surf.Area= 1,022 sf Storage= 2,389 cf

Plug-Flow detention time= 399.9 min calculated for 2,230 cf (58% of inflow) Center-of-Mass det. time= 283.2 min (1,023.2 - 740.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	166.40'	510 cf	16.25'W x 32.10'L x 3.50'H Field A
			1,825 cf Overall - 551 cf Embedded = 1,274 cf x 40.0% Voids
#2A	166.90'	551 cf	ADS_StormTech SC-740 +Cap x 12 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
			12 Chambers in 3 Rows
#3	166.50'	1,450 cf	Custom Stage Data (Prismatic)Listed below (Recalc)
			<u> </u>

2,511 cf Total Available Storage

#### Storage Group A created with Chamber Wizard

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
166.50	500	0	0
169.40	500	1,450	1.450

Device	Routing	Invert	Outlet Devices	
#1	Discarded	166.40'	1.020 in/hr Exfiltration over Surface area	
#2	Primary	169.50'	6.0" Horiz. Orifice/Grate C= 0.600	
			I imited to weir flow at low heads	

**Discarded OutFlow** Max=0.02 cfs @ 7.62 hrs HW=166.50' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.40' (Free Discharge) 2=Orifice/Grate ( Controls 0.00 cfs)

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#### Pond 7P: STORM TECH SYSTEM - Chamber Wizard Field A

Chamber Model = ADS\_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 5.0" Spacing = 56.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 30.10' Row Length +12.0" End Stone x 2 = 32.10' Base Length

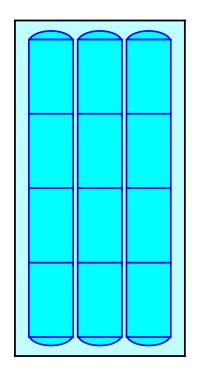
3 Rows x 51.0" Wide + 5.0" Spacing x 2 + 16.0" Side Stone x 2 = 16.25' Base Width 6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

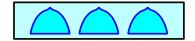
12 Chambers x 45.9 cf = 551.3 cf Chamber Storage

1,825.5 cf Field - 551.3 cf Chambers = 1,274.2 cf Stone x 40.0% Voids = 509.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,061.0 cf = 0.024 af Overall Storage Efficiency = 58.1% Overall System Size = 32.10' x 16.25' x 3.50'

12 Chambers 67.6 cy Field 47.2 cy Stone



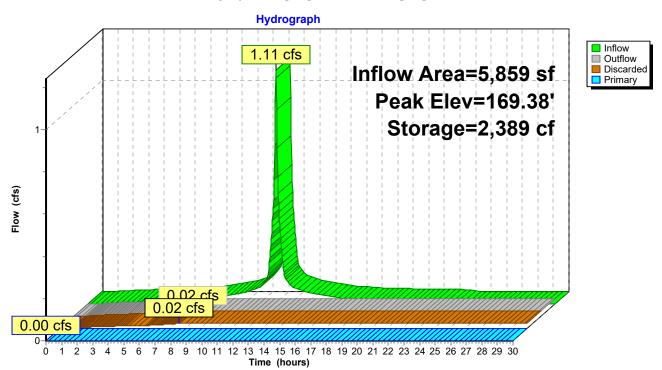


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#### **Pond 7P: STORM TECH SYSTEM**



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# **Summary for Link 3L: PROPOSED**

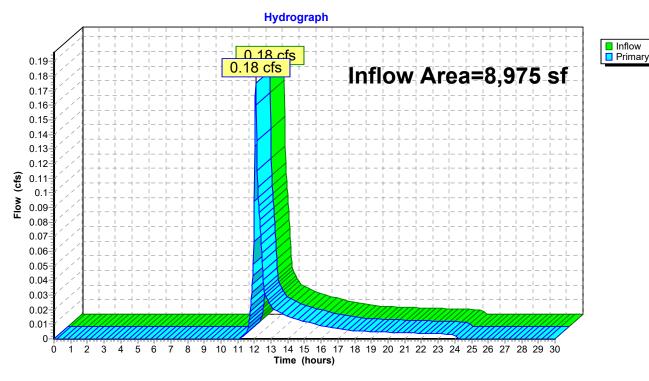
Inflow Area = 8,975 sf, 65.28% Impervious, Inflow Depth = 0.77" for 100-Year event

Inflow = 0.18 cfs @ 12.09 hrs, Volume= 579 cf

Primary = 0.18 cfs @ 12.09 hrs, Volume= 579 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

#### Link 3L: PROPOSED



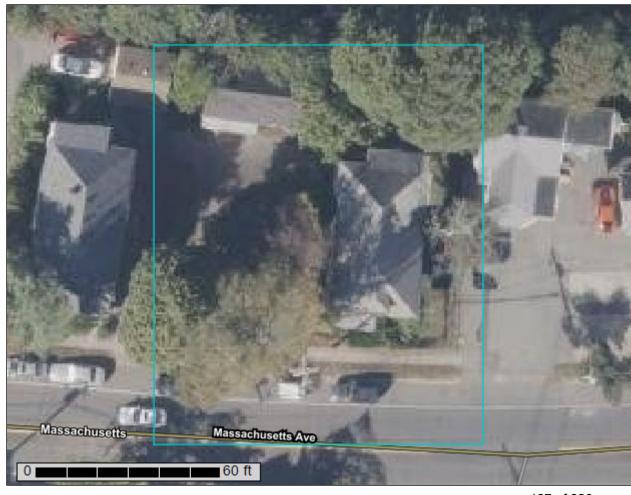
# Appendix B – Soils Information



**NRCS** 

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Middlesex County, Massachusetts



# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



#### MAP LEGEND

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

#### **Special Point Features**

(o)

Blowout

Borrow Pit

Clay Spot

**Closed Depression** 

Gravel Pit

Gravelly Spot

Landfill

Lava Flow Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Sodic Spot

Slide or Slip

Spoil Area



Stony Spot

00

Very Stony Spot

Ŷ

Wet Spot Other

Δ

Special Line Features

#### Water Features

Streams and Canals

#### Transportation

---

Rails

Interstate Highways

**US Routes** 

Major Roads

00

Local Roads

#### Background

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts Survey Area Data: Version 23, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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130 of 226 10

# **Map Unit Legend**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
602	Urban land	0.1	38.2%	
629C	Canton-Charlton-Urban land complex, 3 to 15 percent slopes	0.2	61.8%	
Totals for Area of Interest		0.3	100.0%	

# **Map Unit Descriptions**

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

#### Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

### Middlesex County, Massachusetts

#### 602—Urban land

#### **Map Unit Setting**

National map unit symbol: 9950

Elevation: 0 to 3,000 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Urban land: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Urban Land**

#### Setting

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Excavated and filled land

#### **Minor Components**

#### **Rock outcrop**

Percent of map unit: 5 percent

Landform: Ledges

Landform position (two-dimensional): Summit Landform position (three-dimensional): Head slope

Down-slope shape: Concave Across-slope shape: Concave

#### Udorthents, wet substratum

Percent of map unit: 5 percent

Hydric soil rating: No

#### **Udorthents, loamy**

Percent of map unit: 5 percent

Hydric soil rating: No

#### 629C—Canton-Charlton-Urban land complex, 3 to 15 percent slopes

#### **Map Unit Setting**

National map unit symbol: 9959

Elevation: 0 to 1,000 feet

Mean annual precipitation: 32 to 54 inches

#### Custom Soil Resource Report

Mean annual air temperature: 43 to 54 degrees F

Frost-free period: 110 to 240 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Canton and similar soils: 40 percent Charlton and similar soils: 30 percent

Urban land: 25 percent Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Canton**

#### Setting

Landform: Hills

Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Linear Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable sandy basal till derived

from granite and gneiss

#### **Typical profile**

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 21 inches: fine sandy loam
H3 - 21 to 65 inches: gravelly loamy sand

#### Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 18 to 30 inches to strongly contrasting textural

stratification

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00

in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

#### **Description of Charlton**

#### Setting

Landform: Ground moraines, drumlins

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Linear Across-slope shape: Convex

Parent material: Friable loamy eolian deposits over friable loamy basal till derived

from granite and gneiss

#### Custom Soil Resource Report

#### Typical profile

H1 - 0 to 5 inches: fine sandy loam H2 - 5 to 22 inches: sandy loam

H3 - 22 to 65 inches: gravelly sandy loam

#### **Properties and qualities**

Slope: 3 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

#### **Description of Urban Land**

#### Setting

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Excavated and filled land

#### **Minor Components**

#### Montauk

Percent of map unit: 2 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Head slope, nose slope

Down-slope shape: Convex Across-slope shape: Convex

Hydric soil rating: No

#### **Scituate**

Percent of map unit: 2 percent Landform: Hillslopes, depressions

Landform position (two-dimensional): Summit, toeslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Linear Across-slope shape: Concave

Hydric soil rating: No

#### **Udorthents, loamy**

Percent of map unit: 1 percent

Hydric soil rating: No

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# SPRUHAN ENGINEERING, P.C.

# OPERATIONS & MAINTENANCE PLAN

1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.



Prepared by: Spruhan Engineering, P.C.

December 18, 2024

**Operations & Maintenance Plan** 

Introduction

The following Stormwater Operations & Maintenance plan is for 1513-1519 Massachusetts avenue,

Arlington, MA. All erosion and sediment control measures to be used are to be constructed and installed

according to the 'Massachusetts Erosion and Sediment Control Guidelines for Urban and Sub-Urban Areas.'

The plan consists of the following elements:

• Owners' information

• Operation and maintenance guidance – Pre and Post Construction

• Landscape installation and maintenance guidance

Proposed inspection log

All erosion and sediment control measures must be installed prior to the commencement of any work. All sediment and erosion control measures shall remain in place until the entire site has been stabilized. The site is

deemed stabilized when all landscaped areas have been loamed and seeded with vegetation having had the

chance to establish itself. Any proposed paved areas shall have their binder course of pavement installed prior

to the removal of these control measures.

The long-term operation and maintenance of a stormwater management system is as critical to its performance

as its design and construction. Proper operation and maintenance ensure that the BMP will continue to remove pollutants effectively over the long-term, decreases the risk of re-suspending sediment; and therefore, improves

water quality. Without proper maintenance, BMPs are likely to fail and no longer provide the necessary

stormwater treatment.

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. Annual reports

(example below) should be submitted to the Town Engineer every January for the prior year.

**Property Owners: IG Investments LLC** 

Name and contact information:

**Managers:** ILYA ZVENIGORODSKIY

Address: 226 Harvard St, Brookline, MA, 02446

**Contact info:** 860-833-4081

Change on ownership: The owner(s) of the stormwater management systems, with the exception of those associated with two-family dwellings, shall notify the Department of Public Works and Conservation

Commission of changes in ownership or assignment of financial responsibility.

This plan is valid in perpetuity and any future property owners are solely responsible for the management of

the stormwater system on-site in accordance with this O&M Plan

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#### **Operations & Maintenance**

The following operations and maintenance plan has been developed in order to preserve the drainage infrastructure that will be constructed and to ensure the drainage and infiltration system continues to function as designed.

#### • Before & During Construction Operation and Maintenance Plan:

- Significant efforts shall be made to only disturb the minimum amount of area necessary to reduce potential erosion and sediment runoff. The control of dust in disturbed areas shall consist of at the least, wetting of disturbed soil or application of calcium chloride as required to minimize airborne dust.
- A stabilized construction entrance shall be installed to reduce the tracking of material onto the main road, &, if necessary, a wheel wash station put in place.
- Hay wattles shall be installed per the site plan to prevent sediment from being washed off site.
- o All drainage structures shall be protected by filter fabric (or approved equal) to prevent sedimentation from entering the drainage system during the construction period.
- o Driveway, pavement, and roadway (if required) areas shall be swept to remove sediments prior to introduction into the storm water management system.
- o Drainage structures shall be inspected daily and cleaned as necessary of all sedimentation and construction materials during the construction period.
- The contractor is required to contact the engineer of record for drainage system inspection at least 72 hours prior to backfilling in order to receive inspection signoff.

#### Post Construction Operation and Maintenance Plan

Once the construction is completed, it is the owner's responsibility to maintain the items outlined below to ensure the efficiency and integrity of the drainage systems. The post construction inspections shall take place at a minimum of once during the Spring (March-May), and a minimum of once during the fall (September – November) and after every major storm.

- Pipes shall be inspected on a minimum on a semi-annual basis. These inspections shall take place during the spring and fall months of the year. The inspector shall take note of any debris/sediment/clogging and shall document the condition of each structure. Based upon the observed condition, the inspector shall make recommendations if any further action is required.
- o All drainage structures, including manholes trench drains, area drains, cleanouts and catch basins, shall be inspected four times per year and shall be cleaned of all sand, debris, and sediment four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- o **Roof Gutters** shall be inspected annually and after major rain events. Remove leaves and sediment as necessary to allow rainwater to flow to system.

#### • Storm-tech SC-740 Maintenance procedures:

- Storm-tech system shall be inspected at a minimum on a semi-annual basis, or after a major storm event.
- Remove lid and cap from inspection ports which must be brought to finished grade.
- Using a flashlight and stadia rod, measure the depth of sediment
- If sediment is above 3" depth, then cleaning is required
- A licensed professional shall provide cleanout/ flushing services of all sediment and debris via cleanouts and catch basins located per plans.
- All caps and covers shall be replaced

#### Other Activities:

**Pavement Sweeping:** The paved areas shall be swept every quarter, so four (4) times per year.

**Lawn and Landscape Repairs:** The lawn and landscaped areas on the site shall be inspected in the spring and fall of each year and the areas shall be restabilized as needed by seeding as lawn or mulching landscaped areas.

An INSPECTION LOG example format is shown below on Table B.1. This must be filled every time an inspection or maintenance activity is performed on any element of the stormwater management on site, included but not limited to:

- o Pretreatment devices.
- Vegetation or filter media.
- o Control structures.
- o Embankments and slopes.
- o Inlet and outlet channels and structures.
- Underground drainage.
- o Sediment and debris accumulation in storage and forebay areas (including catch basins).
- o Any nonstructural practices.
- o Any other item that could affect the proper function of the stormwater management system

\* FINAL IMPORTANT NOTE: PROVISIONS MUST EXIST ALLOWING THE CITY OF NEWTON OR ITS DESIGNEE TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR THE PURPOSE OF INSPECTION.

ILYA ZVENIGORODSKIY PROPERTY OWNER

# **ATTACHMENT A. LOG SHEET AND TABLES**

# OPERATION & MAINTENANCE PLAN LOG SHEET 1513-1519 MASSACHUSETTS AVENUE, ARLINGTON, MA.

# **INSPECTION REPORT:**

Inspection Firm:	
Inspector's Name:	Date:
Signed:	
SYS	TEM MAINTENANCE:
Maintenance Firm:	Date:
Catch Basin Cleaned: Yes No Con	nments:
	_Comments:
•	_
	Comments:
•	
	oComments:
otoriiwater unit bystem dicanea. Tesiv	ocomments
Estimate of Material Removed:	
Other Comments:	
Signed:	

Table 1 - Inspection log for BMP's

STORMWATER MANAGEMENT SYSTEMS INSPECTION LOG									
DATE	NAME OF INSPECTOR	NAME/TYPE OF BMP INSPECTED	CONDITION OF BMP OBSERVED	DESCRIPTION OF NEED FOR MAINTENANCE	OBSERVATIONS OF ANY PHYSICAL CHANGES TO SYSTEM COMPARED TO AS BUILT PLAN	ANNUAL SUBMISSION TO DPW			



# Town of Arlington, Massachusetts

# Department of Planning and Community Development 730 Massachusetts Avenue, Arlington, Massachusetts 02476

# **Public Hearing Memorandum**

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board

From: Claire V. Ricker, AICP Secretary Ex-Officio

Subject: Update to Environmental Design Review, 1513-1515 and 1517-1519 Massachusetts

Avenue, Arlington, MA, Docket #3821

Date: January 7, 2025

#### I. Summary

This memo is provided as an update to the previous planning memo provided on November 27, 2024. The following items were provided by the Applicant since the last hearing:

Materials previously submitted for consideration of this application include:

- Dimensional and Parking Information,
- Impact Statement,
- Site Plan,
- Landscape Plans, and
- Architectural Drawings.

Addition materials submitted for consideration of this application include:

- Revised plan set including Existing Condition Photos, Site Plan, Floor Plans, Roof Plan, Elevations, Façade Design Plan, Façade Characteristics, Façade Materials and Products, Landscape vs Built Area (Open Space Calculation), Public Realm Interface, Landscape Elements, Landscape Plant Category, and Context Rendering,
- Proposed Plot Plan,
- Operations and Maintenance Plan,

- Civil Engineering Design Narrative,
- LEED Checklist,
- Solar Assessment,
- Lighting Plan,
- Stormwater Report.

### II. Application of Special Permit Criteria (Arlington Zoning Bylaw, Section 3.3)

#### 1. Section 3.3.3.A.

The use requested is listed as a Special Permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

As per Section 5.5.3, Use Regulations for Business Districts, a mixed-use building is allowed in the B1 Neighborhood Office District with a Special Permit under the jurisdiction of the ARB due to its location on Massachusetts Avenue. The Board can find this condition met.

#### 2. <u>Section 3.3.3.B.</u>

The requested use is essential or desirable to the public convenience or welfare.

The Master Plan recommends supporting commercial areas by encouraging new mixed-use redevelopment, including residential and commercial uses, in and near commercial corridors. This new development is in close proximity to the Arlington Heights commercial district and businesses along Massachusetts Avenue. The project contains five residential units and a commercial space. The five residential units include one accessible ground floor unit. The Board can find this condition met.

#### 3. Section 3.3.3.C.

The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

The proposed mixed use will not create traffic congestion or impair pedestrian safety. The Board can find this condition met.

#### 4. Section 3.3.3.D.

The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.

The Project will not overload any public water, drainage, sewer system or other municipal system. The Board can find this condition met.

#### 5. Section 3.3.3.E.

Any special regulations for the use as may be provided in the Bylaw are fulfilled.

There are no special regulations for the proposed use. The Board can find this condition met.

#### 6. <u>Section 3.3.3.F.</u>

The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals, or welfare.

The requested mixed use does not impair the integrity or character of the B1 district or adjoining districts and will not be detrimental to health or welfare. The surrounding uses are made up of residential, commercial, and mixed-use properties. The Board can find this condition met.

#### 7. <u>Section 3.3.3.G.</u>

The requested use will not, by its addition to a neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

There will be no excess of mixed-use in the neighborhood as a result of this development; rather the Applicant's proposal will comport with the objectives of the Master Plan to maintain a mixed-use component along Mass Ave. The Board can find this condition met.

#### III. Environmental Design Review Standards (Arlington Zoning Bylaw, Section 3.4)

#### 1. EDR-1 Preservation of Landscape

The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

The existing landscape will be preserved wherever possible. The proposed landscape is located in the rear and side setbacks with decks and roof decks proposed for each unit. A garden area is also proposed in the rear setback. The Project includes the planting of thirteen new trees, and measures will be taken to ensure their long-term health. Tree removal will be limited to trees determined to be in fair or poor health by a certified arborist. The project proposes to preserve one tree on the site that was determined to be in good health. There is no significant slope on the property thus grade changes are minimal. The Board can find this condition met.

#### 2. EDR-2 Relation of the Building to the Environment

Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

As a major corridor, Mass Ave is designed to accommodate and promote mixed-use development as contemplated in the Master Plan. The proposed new building design relates to the neighborhood and vicinity. Nearby structures include a small restaurant and a 12-unit multifamily apartment building on the 1500 block of Massachusetts Avenue and one- and two-family buildings across Massachusetts Avenue. Additionally, the structures to be demolished are close in height to this proposed new building. The addition of five new housing units should have a favorable impact on the community and will provide new housing opportunities. The commercial use will bring street activity to the property and enhance the streetscape. Moreover, based on the change in topography from the opposite side of Mass Ave, the final height of the proposed structure will be less than many of the structures across the street.

The applicant proposes a front setback of less than the required 20', bringing the front of the planned building to within 4' of the back of sidewalk and seeks relief from §5.5.2.A. Dimensional Requirements: front setback. Bringing this mixed-use building towards the sidewalk will serve to strengthen and enhance the streetscape, which is desirable along the Mass Ave corridor. The Board can find this condition is met.

#### 3. EDR-3 Open Space

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

Open space is being provided in the form of landscaped areas in the building side and rear setbacks, and private decks for each residential unit. Overall, the decks and landscaped open space will provide an enjoyable streetscape and usable open space for the residents. The Board can find this condition met.

#### 4. EDR-4 Circulation

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

The project proposes a single curb cut providing vehicular and bicycle access into the parking area which has five total vehicle parking spaces including one accessible space. The Project proposes one-to-one parking per residential unit and is utilizing the parking exemption for the first 3,000 square feet of commercial space in a mixed-use development per section 6.1.C in an effort to reduce reliance on motor vehicles and vehicular traffic. The Project requires 0.1 long-term and 0.6 short-term bicycle parking spaces for the 960 square feet of retail space. Additionally, the residential use requires 8 long-term spaces and one short-term space, for a total requirement of 8 long term and 2 short term bicycle parking spaces. The plans show an outdoor bike locker and long term storage area for six bikes, the Board may request adding two additional spaces to meet the requirements of 6.1.12.D.

#### 5. EDR-5 Surface Water Drainage

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas.

In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to ensure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do.

The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

A full stormwater management plan has been developed and is included with the meeting materials, and the project includes several green features which will improve water runoff and stormwater management. The Board can find this condition met.

#### 6. EDR-6 Utility Service

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

Currently electrical, telephone and cable services are delivered to the project site above ground as is typical for this section of Mass Ave. The applicant has requested that those existing services remain overhead. Sanitary sewage disposal and solid waste disposal from the building will be in accordance with all codes and local requirements.

#### 7. EDR-7 Advertising Features

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

Any signage and advertising will be in accordance with the provisions of Section 6.2 of the Zoning By-Law, compliant with the B1 Neighborhood Office District requirements. Final signage will need to be submitted, reviewed, and approved administratively by the Department of Planning and Community Development or reviewed by the Board for a sign permit.

#### 8. EDR-8 Special Features

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

The proposed new building's special features will be properly screened and situated on the property to minimize exposure of service and utility areas. All special features will be housed inside the new building. The Board can find this condition met.

#### 9. EDR-9 Safety

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

The interior and exterior of the building have been designed to facilitate building evacuation including two forms of egress per unit. The proposed property will provide access to the building for fire, police and other emergency personnel and equipment from Mass Ave. The Board can find this condition met.

#### 10. EDR-10 Heritage

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

This project includes demolition of two residential structures that are not listed on the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington* and are not under the jurisdiction of the Arlington Historical Commission. Moreover, there are no adjacent properties listed on the Inventory. The Board can find that this condition is met

#### 11. EDR-11 Microclimate

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air, and water resources or on noise and temperature levels of the immediate environment.

The proposed project seeks to minimize adverse impacts on light, air, and water resources and on noise and temperature levels of the immediate environment. The proposed uses are non-intrusive, as residential and commercial uses are part of Arlington's long-term goals for Mass Ave and historically residential units and a small commercial space do not drastically alter the noise or temperature levels of the area. The project includes a number of environmentally friendly features, such as open space, landscaping, solar ready roof, EV charging stations and energy efficient appliances which promote mixed-use development in a responsible manner. The Board can find this condition met.

#### 12. EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

The project currently contains the following:

- Compliance with the Stretch Energy Code
- Sustainable building materials
- Energy efficient appliance and mechanical systems
- Energy efficient lighting
- Solar ready roof
- Light colored roofing system
- Sustainable landscaping plantings
- Non-invasive plant materials
- Stormwater management
- EV charging stations

#### IV. Findings

- 1. The ARB can find that the project is consistent with Environmental Design Review per §3.4 of the Zoning Bylaw.
- 2. The ARB can find that the project is consistent with §3.3, Special Permits of the Zoning Bylaw.
- 3. The ARB can find that the project is consistent with §5.5.2.A.

#### V. Conditions

#### A. General

- 1. The final design, sign, exterior material, landscaping, and lighting plans shall be subject to the approval of the Arlington Redevelopment Board or administratively approved by the Department of Planning and Community Development.
- 2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.
- The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions or modify these conditions as it deems appropriate in order to protect the public interest and welfare.
- 4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.
- Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Article 30 of Town Bylaws.
- 6. The Applicant shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The applicant shall provide evidence that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.

- 7. Upon installation of landscaping materials and other site improvements, the Applicant shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.
- 8. All utilities serving or traversing the site (including electric, telephone, cable, and other such lines and equipment) shall be underground.
- 9. Upon the issuance of the building permit, the Applicant shall file with the Building Inspector and the Department of Community Safety the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.
- 10. Building signage shall be filed with and reviewed and approved by the Department of Planning and Community Development and Inspectional Services.
- 11. The applicant must comply with the conditions set forth herein, with the State Building Code, including the Town of Arlington requirements, and, where applicable, with the Massachusetts Architectural Access Board regulations.
- 12. The applicant must obtain the necessary building permits and work with the Town Engineer to ensure compliance with all applicable codes.



#### **Town of Arlington, Massachusetts**

Public Hearing: Docket #3798, 821 Massachusetts Ave (continued from October 21, 2024)

Summary:

8:30 pm

The public hearing is continued to allow the Board to review and approve the application under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

#### ATTACHMENTS:

	Туре	File Name	Description
ם	Application for Special Permit	ARBEDR_Special_Permit_Application _821_Mass_AveFinal2024-12-30.pdf	EDR Special Permit Application - 821 Mass Ave - Final - 2024-12-30
D	Special Permit	•	821 Mass Avenue - Drawing Set - 2024-12-30
ם	Application for Special Permit	Letter_to_ARB_821- 837_Mass_Ave_Docket_No3798_NOYES_2025- 01-06.pdf	Letter to ARB 821-837 Mass Ave Docket 3798 - 2025-01-06
D	Application for Special Permit	EDR_memo_Docket_3798_821_Mass_Ave _UPDATED_01022025.pdf	EDR memo Docket 3798 821 Mass Ave - UPDATED 01022025

#### REQUIRED SUBMITTALS CHECKLIST

One electronic copy of your application is required; print materials may be requested, Review the ARB's Rules and Regulations, which can be found at <a href="https://www.arlingtonma.gov/arb">www.arlingtonma.gov/arb</a>, for the full list of required submittals.

	Application Cover Sheet (project and property information, applicant information)
$\bigvee$	Dimensional and Parking Information Form (see attached)
	Impact statement
	Statement should respond to Environmental Design Review (Section 3.4) and Special Permit (Section 3.3) criteria on pages 6-8 of this packet): include:

criteria on pages 6-8 of this packet); include:

- LEED checklist and sustainable building narrative as described in criteria 12.
- Summary of neighborhood outreach, if held or planned.

### ✓ Drawing and photographs of existing conditions

- Identify boundaries of the development parcel and illustrate the existing conditions on that parcel, adjacent streets, and lots abutting or directly facing the development parcel across streets.
- Photographs showing conditions on the development parcel at the time of application and showing structures on abutting lots.

### Site plan of proposal. Must include:

- Zoning boundaries, if any, and parcel boundaries;
- · Setbacks from property lines;
- Site access/egress points;
- Circulation routes for pedestrians, bicyclists, passenger vehicles, and service/delivery vehicles;
- New buildings and existing buildings to remain on the development parcel, clearly showing points of entry/exit;
- Other major site features within the parcel or along its perimeter, including but not limited to trees, fences, retaining walls, landscaped screens, utility boxes, and light fixtures;
- Spot grades or site topography and finish floor level;
- · Open space provided on the site;
- Any existing or proposed easements or rights of way.

### ✓ Drawings of proposed structure

- Schematic drawings of each interior floor of each proposed building, including basements.
- Schematic drawings of the roof surface(s), identifying roof materials, mechanical equipment, screening devices, green roofs, solar arrays, usable outdoor terraces, and parapets.
- Elevations of each exterior façade of each building, identifying floor levels, materials, colors, and appurtenances such as mechanical vents and light fixtures.
- Drawings from one or more prominent public vantage point illustrating how the proposed project will appear within the context of its surroundings.
- Graphic information showing façade materials and color samples.
- Include lighting plan and fixtures if not provided on site or landscaping plan.

#### ARLINGTON REDEVELOPMENT BOARD

	Application	Troi Special Fermit Orider Environmental Design Review				
	Vehicle, Bicycle, and Service Vehicle Plans					
	<ul> <li>Parking and loading plans, including all vehicle and bicy within a structure, showing dimensions of spaces, drive Include line-of-sight and turning radius along with lengt</li> <li>If you are requesting a reduction in the amount of requipment Management Plan per Section 6.1.5.</li> <li>Plans of all bicycle parking facilities located on the lot are of spaces and access routes and types of bicycle racks.</li> </ul>	eways, access aisles, and access/egress points. th and type of delivery truck. uired parking, include a Transportation				
	Sustainable Building and Site Design Elements					
<b>.</b>	<ul> <li>A solar energy systems assessment per Section 6.4</li> <li>An analysis for solar energy system(s) for the production;</li> <li>The maximum feasible solar zone area of a Drawings showing the solar energy system the system, the reasons the system was charequirements of Section 6.4; or</li> <li>A detailed explanation of why the project of LEED checklist and narrative per EDR criterion 13.</li> </ul>	he site detailing layout and annual all structures; and, you propose, with a narrative describing losen, and how the system meets the				
$\Box$	Proposed landscaping (may be incorporated into site plan)					
	Schematic drawing(s) illustrating and clearly labels all landscape features, including hardscape materials, permeable areas, plant species, and light fixtures.					
	Plans for sign permits, if signage is an element of development proposal					
	Stormwater management plan					
لعا	(for stormwater management during construction for projects	s with new construction)				
$\checkmark$	SketchUp Compatible Model, if required					
	Application fee					
<b>Y</b>	(See <u>Rule 12 of the ARB Rules and Regulations</u> for how to calculate the fee)					
	FOR OFFICE USE ONLY	Docket #:				
	TOR OTTICE OSE OILE.	DUCKEL #.				
	Special Permit Granted	Date:				
	Received evidence of filing with Registry of Deeds	Date:				
	Notified Building Inspector of Special Permit filing	Date:				

#### **COVER SHEET**

### Application for Special Permit in Accordance with Environmental Design Review

PROF	PERTY AND PROJECT INFORMATION			
1.	Property Address 821 Massachusetts Av	enue, Arlingto	n MA	
	Assessors Block Plan, Block, Lot No. 052.0-000			Zoning District B4
2.	Deed recorded in the Registry of deeds, Book		69	
	or- registered in Land Registration Office, Cert. No	), ii	n Book _	, Page
3.	Present Use of Property (include # of dwelling united Vacant Building and CVS Store	ts, if <mark>any)</mark>		
4.	Proposed Use of Property (include # of dwelling u First Floor Front - 2 Office Spaces; First Flo	A COUNTY OF THE PARTY OF THE PA	d and Thi	rd Floors - 3 Residential Units
APPL	ICANT INFORMATION			
1.	Applicant: Identify the person or organization rec	questing the Speci	al Permit:	
	Name of Applicant(s) Geoffrey Noyes			
	Organization Noyes Realty, LLLP			
	Address P.O. Box 40		Marbleh	nead MA 01945
	Phone (781) 864-9686 Er	mail gpnoyes@	ity, State, Zi	**
2.	Applicant Interest: the applicant must have a leg	al interest in the s	ubject pro	perty:
	✓ Property owner	Purcha	ser by lan	d contract
	Purchaser by option or purchase agreement	Lessee	/tenant	
3.	Property Owner	applicant is also p	property o	wner
	Identify the person or organization that owns the	subject property:		
	Name T	itle		
	Address			

Email \_\_

Street

Phone \_\_\_\_\_

City, State, Zip

#### ARLINGTON REDEVELOPMENT BOARD

Application for Special Permit Under Environmental Design Review

4.	Representative: lo	lentify any person represent	ing the property o	wner or applicant in this matter:				
		nstansley-O'Connor	Title Attorne	4. 7				
	Organization Krattenmaker O'Connor & Ingber, P.C. Phone (617) 523-1010							
	Address One	McKinley Sq., 5th		Boston MA 02109				
	Street	The second secon		City, State, Zip				
	Phone (617) 5	23-1009	Email Mocor	nor@koilaw.com				
5.	Permit applied for	in accordance with the follow	ving Zoning Bylaw	section(s)				
	3.3 Request for Special Permit							
	3.4	Environmental Design Review						
	section(s)		titl	e(s)				
6.		ing requested and the Zonin which you are seeking relief		which refer to the minimum or ma	aximum			
	section(s)		titl	e(s)				
7.		ing the permits you request.		e any additional information that n ons that you feel you should be gra				
		(In the statement be	elow, check the option	ns that apply)				
The app	plicant states that N	oyes Realty, LLLP	is the owner ✓	or occupant or purchaser under	agreement 🗌			
of the	property in Arlington	n located at 821 Massachuse	etts Avenue, Arling	gton MA				
which i	is the subject of this	application; and that unfav	vorable action	or no unfavorable action \_ has				
				roperty within the last two years				
		ly with any and all condition development Board, should		ns imposed upon this permission nted.	i, either by the			
Signatur	e of Applicant(s):							
_	200	soft						
P.O.	. Box 40. Ma	rblehead, MA 019	45	(781) 864-968	86			
Address		and the second s		Phone				

#### **ARLINGTON REDEVELOPMENT BOARD**

Application for Special Permit Under Environmental Design Review

#### **DIMENSIONAL AND PARKING INFORMATION**

Property Location: 821 Massachusetts Avenue
Applicant: Noyes Realty, LLP
Applicant: Vacant Building/Retail Space

Zoning District: B4 Business District
Address: PO Box 40, Marblehead MA 01945

Uses and their gross square feet:
40,449 GSF

Proposed Use/Occupancy: No. of Dwelling Units:

2 Retail/Office Spaces & 4 Residential Units

Uses and their gross square feet:

<u>2 Retail/Office (2,104 SF Total)</u>; <u>4 Units (1,521 SF</u>, 2,375 SF, 2,375 SF, 2,213 SF). CVS Retail (36,945 SF).

		Present Conditions	Proposed Conditions	Min. or Max. Req'd by Zoning for Proposed Use
Lot Size		79,864	79,864	min. 20,000
Frontage		291.49	291.49	min. 50
Floor Area Ratio <sup>1</sup>		0.50	0.59	max. 1.0
Lot Coverage (%), where a	oplicable	17.9	21.8	max. NA
Lot Area per Dwelling Unit	(sf)	0	NA	min. NA
Front Yard Depth (feet)		10.0	8.6	min. 0
Side Yard Width (feet)	right side	17.9	8.3	min. 0
	left side	122.4	122.4	min. 0
Rear Yard Depth (feet)		91.9	91.9	min. 22.5
Height	stories	2.5	3	stories <sup>2</sup> 4
	feet	26	36.33	Feet 50
Open Space (% of G.F.A.) <sup>3</sup>				min.
	Landscaped (sf)	5,607	5,607	(sf) 4,767
	Usable (sf)	0	1,695	(sf) 953
Parking Spaces (#) <sup>4</sup>		73	73	min. 48
Parking Area Setbacks (feet) (where opplicable)		NA	NA	min. NA
Loading Spaces (#)		NA	NA	min. NA
Bicycle Parking <sup>5</sup>	short term	5	8	min. 8
	long term	5	11	min. 11

<sup>&</sup>lt;sup>1</sup> FAR is based on Gross Floor Area. See Section 5.3.22 for how to calculate Gross Floor Area. On a separate page, provide the calculations you used to determine FAR, including the calculations for Gross Floor Area.

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<sup>&</sup>lt;sup>2</sup> Where two heights are noted in the dimensional tables, refer to Section 5.3.19, Reduced Height Buffer Area to determine the applicable height or the conditions under which the Board may provide relief.

<sup>&</sup>lt;sup>3</sup> Per Section 5.3.22(C), district dimensional requirements are calculated based on GFA. On a separate page, show how you determined the open space area amounts.

<sup>&</sup>lt;sup>4</sup> See Section 6.1, Off-Street Parking. If requesting a parking reduction, refer to Section 6.1.5.

<sup>&</sup>lt;sup>5</sup> See Section 6.1.12, Bicycle Parking, or refer to the <u>Bicycle Parking Guidelines.</u>



#### 821 MASSACHUSETTS AVENUE, ARLINGTON MA

**RD 2958** 

**Town of Arlington Redevelopment Board** 

#### ARB IMPACT STATEMENT

12/30/2024

Rojas Design, Inc.

#### **Building Use and Size**

This new mixed-use building will be three stories tall and have a total gross area of 16,792 GSF (including a 4,448 GSF Basement – storage & mechanical), or **12,344 GSF** without the Basement. The First Floor has a total gross area of 4,448 GSF, the Second Floor has a total gross area of 3,948 GSF, and the Third Floor has a total gross area of 3,948 GSF. The building would have a **total height of 36'-3" above average finished grade**. The new building is completely compliant with the Town of Arlington Zoning Bylaw's Dimensional Requirements for this district. The site will have **9 off-street parking spaces** (including one handicap space) dedicated to this building.

The building includes two retail/office spaces, one accessible residential unit on the ground floor, and three residential units on the upper floors. All retail/office spaces and residential units shall have 2 means of egress. The ground floor retail/office spaces shall be designed for code-compliant accessibility and will have direct on-grade entries. The common roof would include private, trellised roof decks for three upper floor residential units, as well as the solar panels (50% of the roof area).

The proposed Uses and Sizes are as follows:

- Two (2) Retail/Office Spaces First Floor, on-grade fully accessible (1,052 SF each), or One (1) Retail/Office Space First Floor, on-grade fully accessible (2,104 SF);
- Unit 1 One (1) Ground Floor Accessible Residential Unit (1,521 SF-TLA) 1 Bedrooms & 1½ Bathrooms. This unit is fully accessible with on-grade entrances and convenient paths to the nearby accessible parking space.
- Unit 2 One (1) Second Floor Residential Unit (2,375 SF-TLA) 3 Bedrooms & 3
   ½ Bathrooms. Unit 2 has Second Floor decks with a total of 198 SF, and an upper Roof Deck area of 1,142 SF. Unit 2, therefore, has a total exclusive use deck area of 1,340 SF;
- Unit 3 One (1) Third Floor Residential Unit (2,375 SF-TLA) 3 Bedrooms & 3½ Bathrooms. Unit 1 has Second Floor decks with a total of 198 SF, and an upper Roof Deck area of 1,142 SF. Unit 3, therefore, has a total exclusive use deck area of 1,340 SF; and,
- Unit 4 One (1) Two-story, Residential Unit on the Second and Third Floors (2,213 SF-TLA) 2 Bedrooms & 2½ Bathrooms. Unit 4 has Second & Third Floor decks with a total of 360 SF, and an upper Roof Deck area of 1,149 SF. Unit 4, therefore, has a total exclusive use deck area of 1,509 SF.



#### **Special Permit Criteria**

- 1. The uses requested (mixed-use) are listed as an allowable use in this zoning district.
- The requested uses (housing and office) are essential and desirable to the public convenience and welfare.
- **3.** The requested uses will not create any undue traffic congestion or in any way impair pedestrian safety. The uses and design will enhance pedestrian access and safety.
- **4.** The requested uses will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested uses or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.
- **5.** Any special regulations for the uses as may be provided in the Bylaw shall be fulfilled.
- **6.** The requested uses will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals, or welfare. The uses and design will strengthen the civic street front and respectfully enhance the adjacent Church courtyard and landscape.
- 7. The requested uses will not, by its addition to a neighborhood, cause an excess of the particular uses that could be detrimental to the character of said neighborhood. The addition of new housing has a very favorable impact to the entire community. New office space will bring needed service providers to this neighborhood.

#### **Environmental Review Criteria**

#### 1. Preservation of Landscape

The existing landscape shall be preserved, as far as practicable, and enhanced. This project minimizes tree and soil removal, and all grade adjustments are in keeping with the general appearance of neighboring developed areas. The existing 'side buffer' tree plantings shall remain and all landscape areas facing the abutters shall be enhanced and improved with new plantings.

#### 2. Relation of Building to Environment

The proposed new building will relate harmoniously to the lot's terrain and to the use, scale, setbacks, materials, and context of the existing buildings in the vicinity that have a functional or visual relationship to the building. The building respects and enhances its side-yard relationship to the abutting church. Additional plantings and landscape improvements will help define a more attractive and effective buffer. The new building's setbacks are consistent with the abutters' and meet the requirements of the Zoning By-Law.

#### 3. Open Space

The project's open spaces are designed to add visual attractiveness and functionality for the residents, visitors, customers, and neighbors. The new entrance landscape and

Page 2



walkways from Massachusetts Avenue are designed to improve pedestrian safety, access, and identification. The new entry landscape plantings shall create a more attractive and pleasing streetside environment. The rear entrance landscape and walkways from the parking lot are similarly designed to enhance a safe pedestrian experience, provide additional plantings, lighting, bicycle parking, and clear access and egress. The upper roof decks for the three residential units provide additional open space amenities and encourage social interaction.

#### 4. Circulation

Special design attention has been given to the building's residential and office entrances, walkways, parking, and pedestrian areas regarding safe vehicular, pedestrian, and bicycle circulation. The building's ground floor is completely accessible and welcoming from both Massachusetts Avenue and the rear parking area. The existing associated rear parking for this building will be re-designed and improved for accessibility and functionality. Short-Term and Long-Term Bicycle Parking will be provided and will be accessible from the rear parking lot. The pedestrian, vehicular, and bicycle circulation improvements will improve safety, access, and attractiveness and will not detract from the use and enjoyment of the proposed building and the neighboring properties.

#### 5. Surface Water Drainage

The site design for this parcel shall include proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site shall be employed and include site planning to minimize impervious surface and reduce clearing and regrading. Best Management Practices may include erosion control and storm water treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Storm water shall be treated on-site, as far as practicable. Storm water that cannot be managed on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected at intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas. The current storm water drainage system in the existing parking lot is very functional and shall be kept in place. The applicant shall maintain all the existing and proposed storm water facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site.

The areas that would be considered for stormwater infiltration are the existing parking areas on the northerly side of the project that are to remain. Deep hole soil testing would be performed to evaluate the potential for stormwater infiltration and to determine if groundwater or ledge are site issues.

A stormwater computer analysis would then be prepared to determine the amount of runoff to be infiltrated. The stormwater management design would propose using roof runoff only. Subsequently, stormwater structures would be designed to mitigate any increases in runoff volumes and flows.

In the end, the stormwater structures would most likely be installed under the existing parking spaces, then the parking spaces would be restored to their original condition and elevations. If necessary, the walkways would be designed with permeable pavers or paving.

Page 3



#### 6. Storm Water Facilities

The project will comply with the Department of Public Work's requirement for the maintenance of all storm water facilities.

#### 7. Utility Service

All proposed electric, telephone, cable TV and other such lines and equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be in accordance with all codes and local requirements.

#### 8. Advertising Features

The size, location, design, color, texture, lighting, and materials of all permanent signs (office and residential) and all other advertising structures or features shall be in conformance with the Town of Arlington's Signage Code and shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties. All signage and advertising features will conform to the provisions of Section 6.2 of the Zoning Bylaw.

#### 9. Special Features

Any exposed utility or service components (meters, transformers, etc.) shall be screened with appropriate plantings to minimize any visual impacts. Final plans shall include all exposed utility and mechanical features and their proposed landscape screening.

#### 10. Safety

All the building's open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police, and other emergency personnel and equipment. As far as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed as to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act. Complete site and building security systems shall be incorporated into the proposed development. The safety and security of all residents, visitors, customers, and neighbors are important priorities of this project. The Arlington Fire Department has reviewed and approved the site plan for compliance with their vehicle access requirements.

#### 11. Heritage

Arlington's heritage shall be respected. The removal, or disruption of historic, traditional, or significant uses, structures, or architectural elements shall be minimized, as far as practicable. The new building will provide a more consistent mixed-use presence on Massachusetts Avenue that relates to the Town's planning goals and priorities.

#### 12. Microclimate

This development proposes a new structure and new hard-surface ground coverage and shall endeavor to minimize, as far as practicable, any adverse impact on light, air, and water resources, or on noise and temperature levels of the immediate environment. The building and site are designed with a focus on climate practicality, sustainability, and maintainability.

#### 13. Sustainable Building and Site Design

This project shall incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. The

#### 821 Massachusetts Avenue, Arlington MA ARB - Impact Statement

**RD 2958** 12/30/2024

building and site are designed with a focus on climate awareness, sustainability, and maintainability. The project is committed to meeting **LEED Silver standards** with the inclusion of the following sustainability components:

- Sustainable exterior and interior building & site materials and products
- Building envelope compliance with the Stretch Energy Code
- Low-Emittance windows & doors
- Energy-efficient mechanical systems
- Indoor Air Quality and thermal comfort
- Energy-efficient lighting and electrical devices
- **Energy Star appliances**
- Cool roofs & Trellis shading
- Solar-Panel Energy System 50% of the roof area with panels
- Short-Term & Long-Term Bicycle Parking
- **Electric Vehicle Charging Station**
- Sustainable and less water-intensive landscape materials
- Non-invasive plant materials
- Additional street trees along Mass Ave in front of CVS and this new building
- Site and building cooling strategies utilizing planting locations
- Waste reduction and recycling
- Storm water management

The building to be demolished and the new construction site is located on the same lot as the existing CVS store building and there are no plans to subdivide the lot with respect to the Applicant's building plans.

The Applicant and members of his team have paid close attention to comments made at prior multiple hearings before both the ARB and the Historical Commission with respect to comments made by Members of the ARB and the Historical Commission as well as other interested parties with respect to what many individuals would like to see located in place of the Atwood House once the Atwood House is demolished.

Both the CVS store and the Atwood House are located on the same lot and there can be no subdivision of the lot to accommodate zoning for either one standing on its own because of zoning bylaw constraints.

At the time of the CVS ARB hearing which took place in 2009, there was language contained in the decision to the effect that there was a contemplation on the part of the Members of the ARB that the Atwood House could be demolished however there was no time constraint related to any plans to demolish the building.

The 2009 CVS ARB Decision contains language allocating certain parking spaces for the Atwood House whether it was to remain, be modified, demolished, or reconstructed.

We believe the Atwood House was constructed in the 1890's and of course the CVS store was constructed in the year 2010.

The Atwood House has been vacant and in a state of disrepair for an extended period of time.

RD 2958 12/30/2024

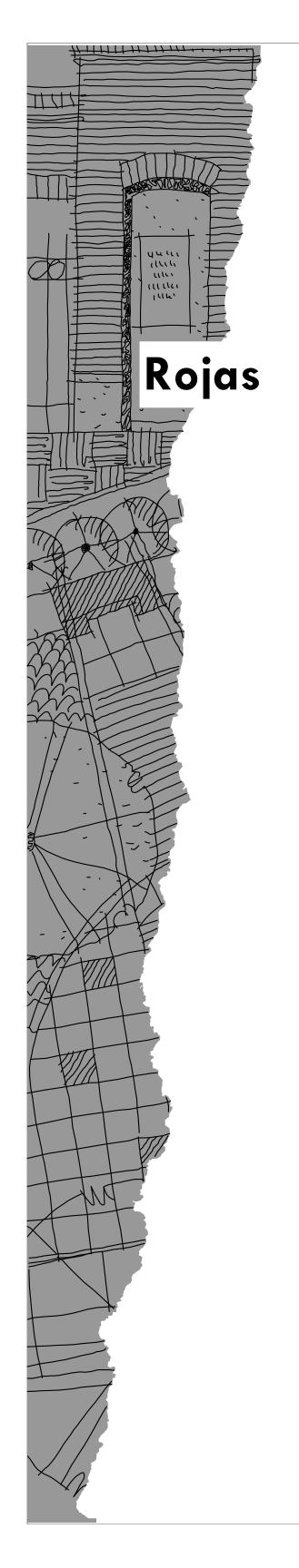
As a result, the Applicant was fined by the Town and has fully paid all fines relating to outstanding building code and/or other violations.

The Applicant has engaged the services of Andres T. Rojas, Rojas Design, Inc., who has prepared mixed-use plans with respect to the submission and is now ready to move forward and obtain approval of the plans, demo the Atwood House, and construct a new mixed-use building all in accordance with the plans submitted to the ARB.

Development of the site will remove a significant "eyesore" on Massachusetts Avenue, the main thoroughfare threw the Town and, at the same time will add additional residential living space in the Town while maintaining a mixed-use component with respect to office use.

For all the above reasons the Applicant respectfully requests that his plans be approved by the ARB.

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# 821 MASSACHUSETTS AVENUE

ARLINGTON REDEVELOPMENT BOARD SUBMISSION - NEW CONSTRUCTION





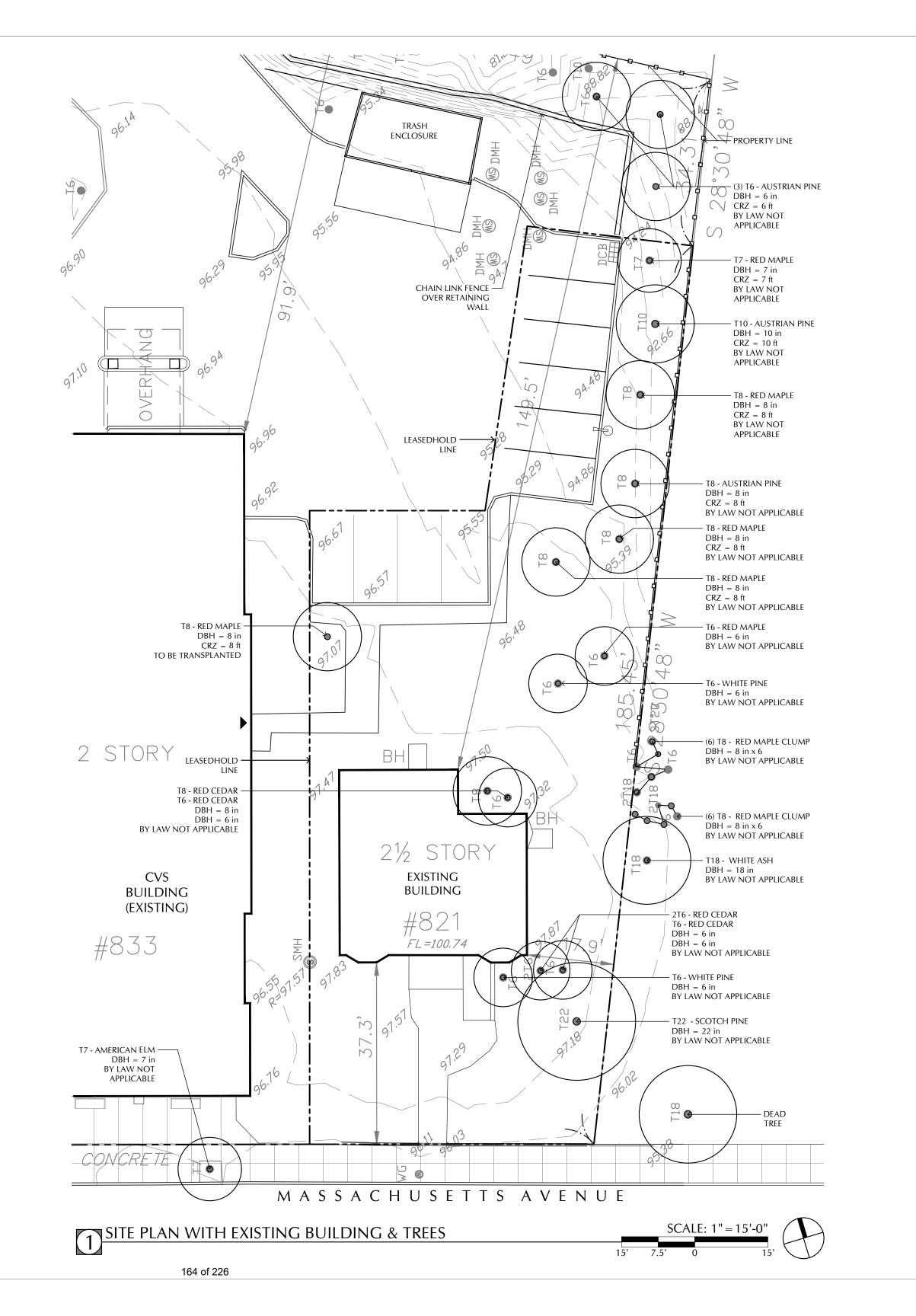
Civil Engineer Owner Architecture | Interior Design | Surveyor Landscape Architecture Rojas Design, Inc. Rober Survey Geoffrey Noyes Gala Simon Associates, Inc. Noyes Realty, LLP P.O. Box 40 394 Lowell Street Suite 18 46 Waltham Street Suite 2A 1072 Massachusetts Avenue Lexington MA 02420 Marblehead MA 01945 Boston MA 02118 Arlington MA 02476 (781) 631-1123 (617) 720-4100 (781) 648-5533 (781) 266-8179 RD 2958

821 MASSACHUSETTS AVENUE ARLINGTON, MA 02476

# SUBMISSION SET 12/30/2024

	SHEET LIST					
Sheet Number	Sheet Title					
	COVER SHEET					
EX- 01	SITE PLAN WITH EXISTING BUILDING & TREES					
TP- 01	TREE PROTECTION REMOVAL PLAN & DETAILS					
	PROPOSED PLOT PLAN BY ROBER SURVEY					
L- 01	PARTIAL BLOCK PLAN & ELEVATIONS - MASSACHUSETTS AVENUE					
L- 02	PROPOSED SITE LAYOUT & MATERIALS PLAN					
L- 03	PROPOSED PLANTING PLAN & PLANT LIST					
L- 04	3-STORY SHADOW STUDY					
L- 05	5-STORY SHADOW STUDY					
A- 01	PROPOSED FIRST FLOOR & SECOND FLOOR PLANS					
A- 02	PROPOSED THIRD FLOOR & ROOF PLANS					
A- 03	PROPOSED BASEMENT PLAN, FRONT (SOUTH) & REAR (NORTH) ELEVATION					
A- 04	PROPOSED SIDE (EAST) ELEVATION & SIDE (WEST) ELEVATION					
	MATERIALS BOARD					
C- 01	EXISTING CONDITIONS PLAN					
C- 02	PROPOSED CONDITIONS DRAINAGE PLAN					
	BOSTON LIGHT SOURCE - PHOTOMETRIC SITE PLAN					

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MASSACHUSETTS
AVENUE
ARLINGTON MA
02476

ARLINGTON
REDEVELOPMENT
BOARD SUBMISSION

Job: 2958
Date: 12/30/2024
Scale: AS NOTED
Drawn: ISP
Checked: ATR

SITE PLAN WITH EXISTING BUILDING & TREES

Rojas Design, Inc.
Architecture
46 Waltham Street Suite 2A
Interior Design
Boston MA 02118
Landscape Architecture
(617) 720-4100

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EX-01



MASSACHUSETTS **AVENUE** ARLINGTON MA 02476

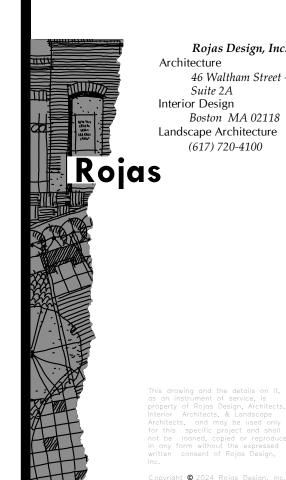
ARLINGTON REDEVELOPMENT **BOARD SUBMISSION** 

> 2958 12/30/2024 **AS NOTED** <u>ISP</u> ATR

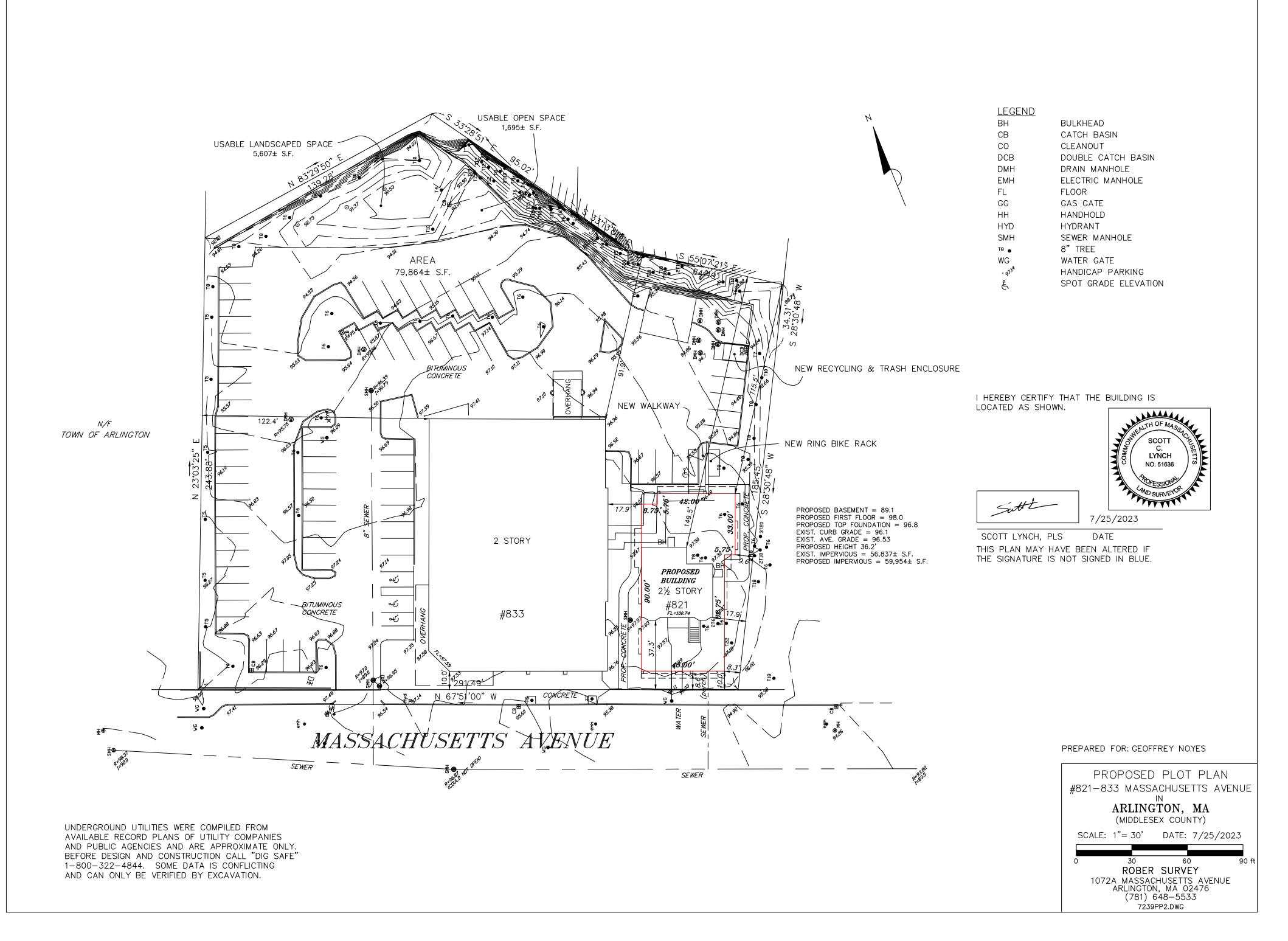
TREE PROTECTION & **REMOVAL PLAN** & DETAILS

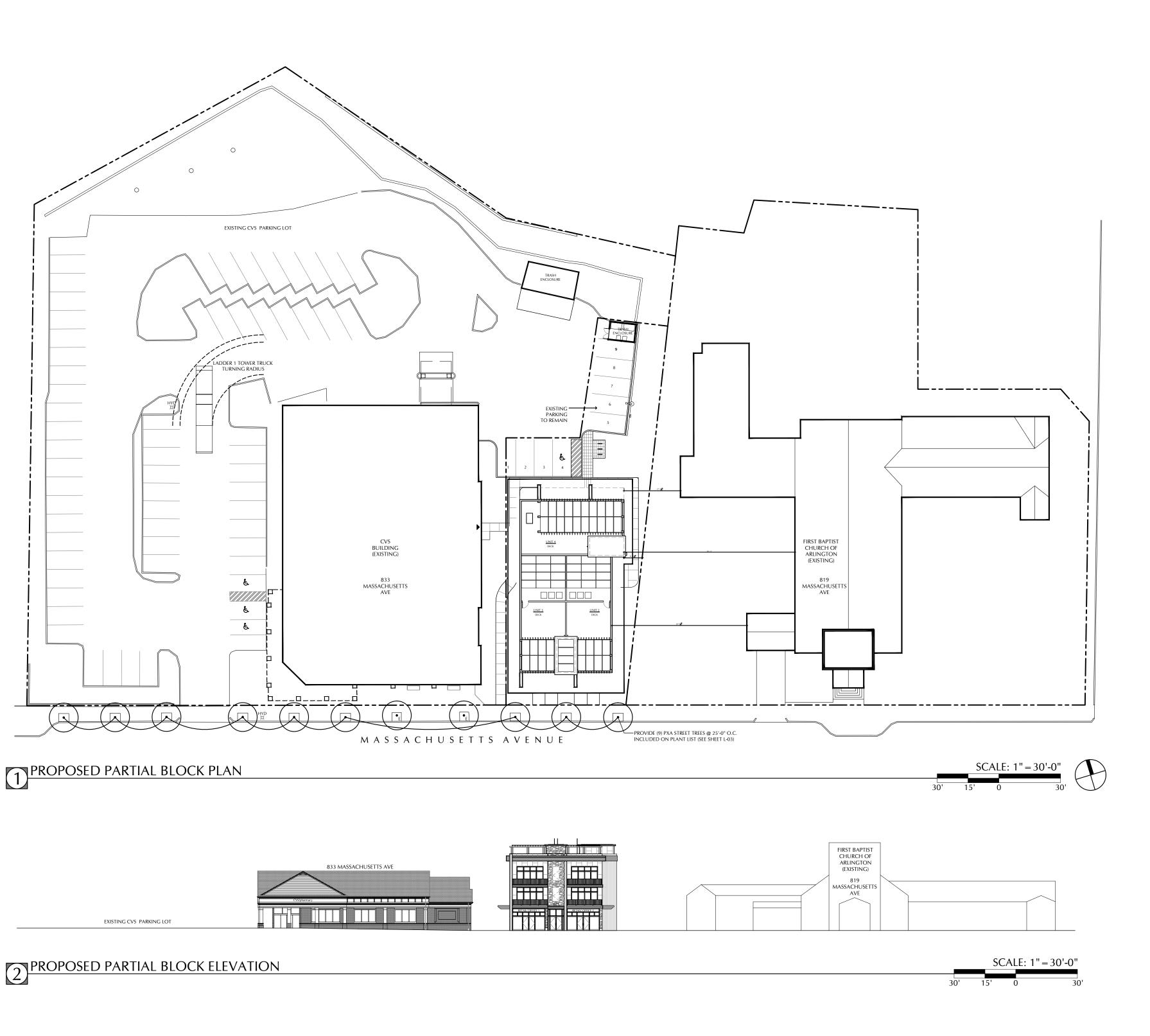
Rojas Design, Inc.

Suite 2A



TP-01





MASSACHUSETTS
AVENUE
ARLINGTON MA
02476

ARLINGTON REDEVELOPMENT BOARD SUBMISSION

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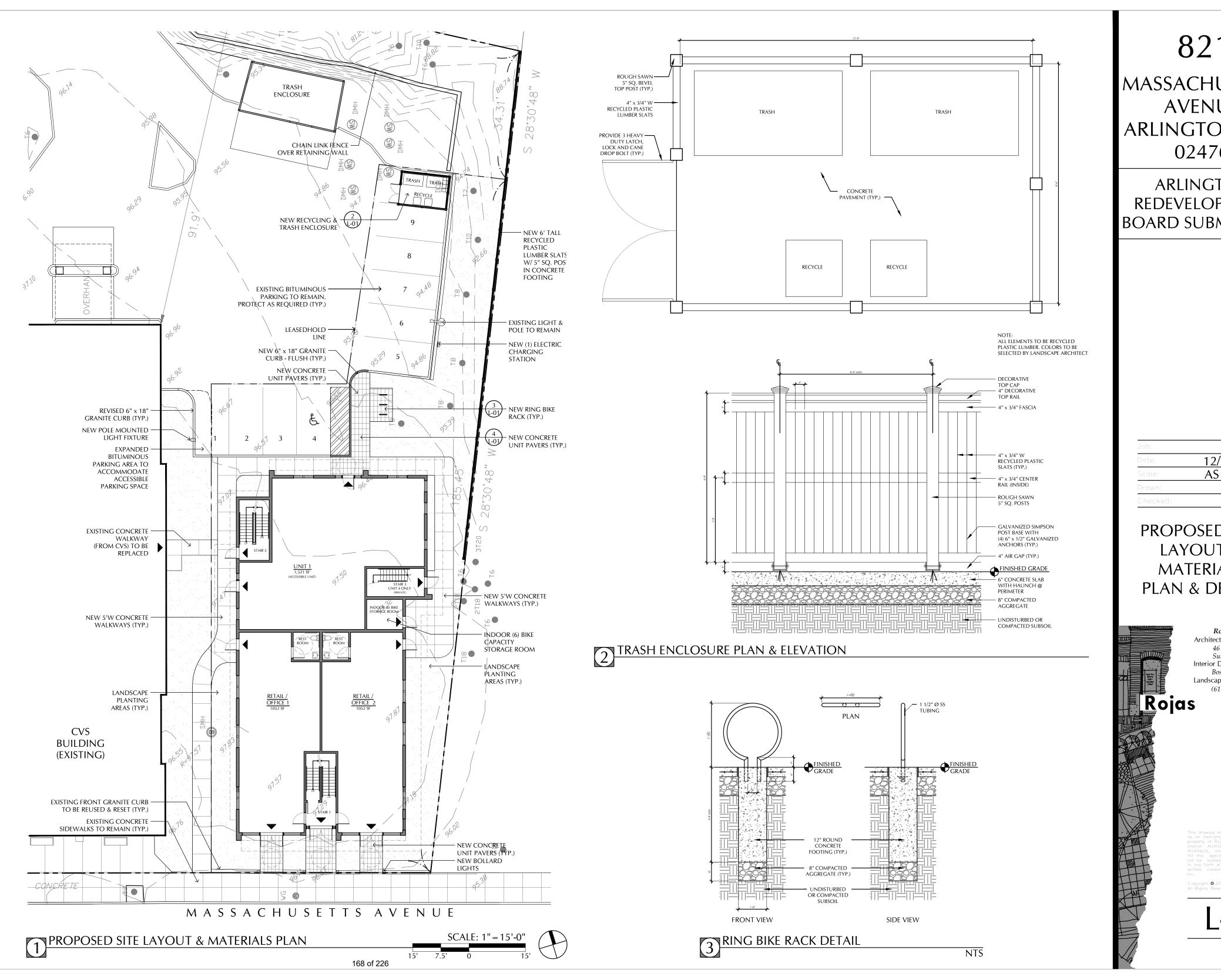
PROPOSED
PARTIAL
BLOCK PLAN
& ELEVATION

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L-01



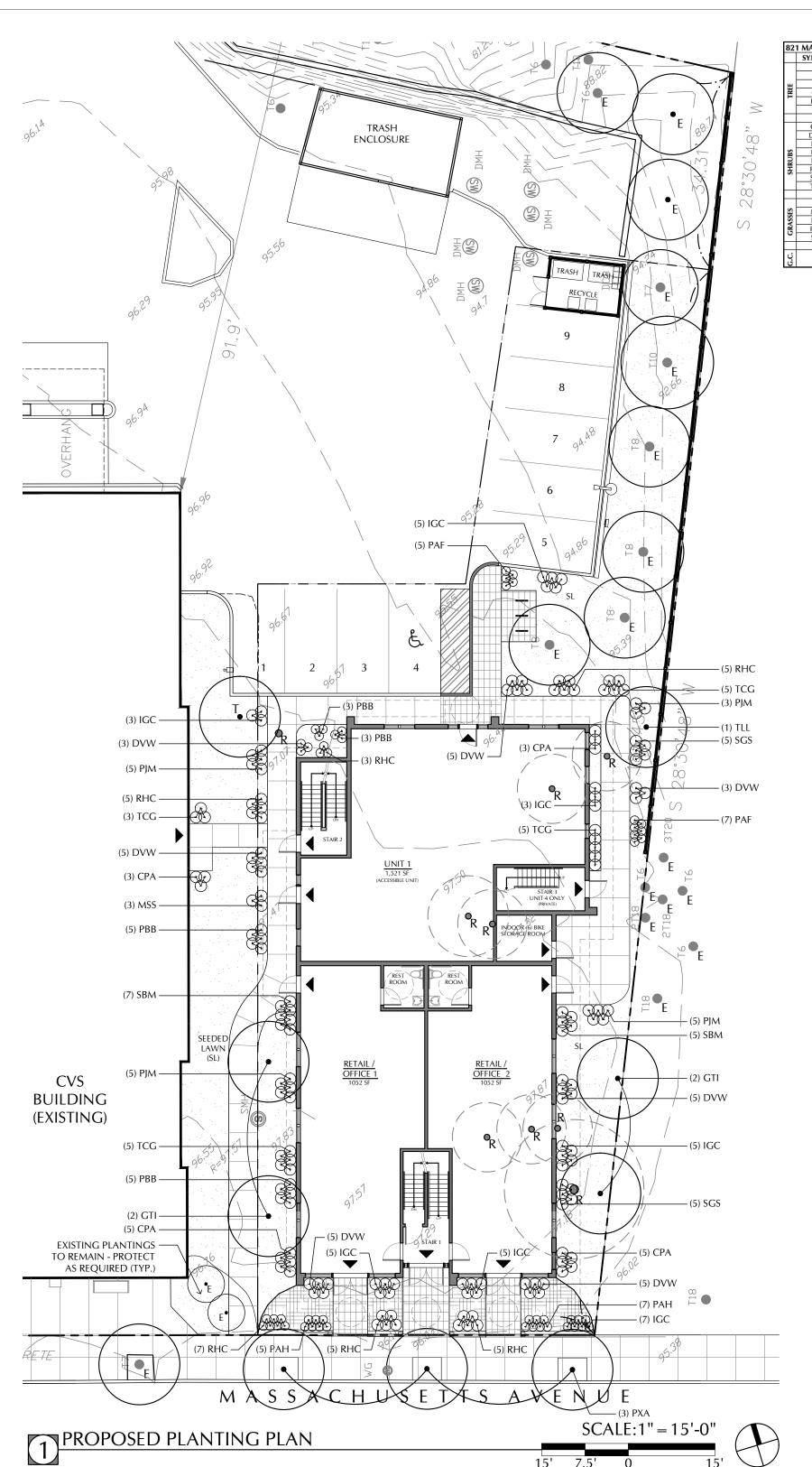
MASSACHUSETTS **AVENUE** ARLINGTON MA 02476

ARLINGTON REDEVELOPMENT **BOARD SUBMISSION** 

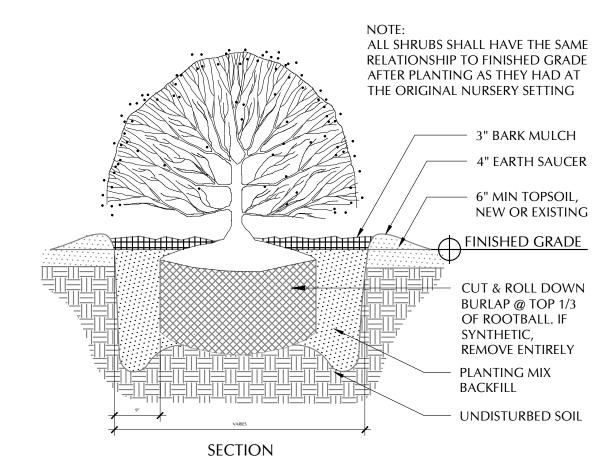
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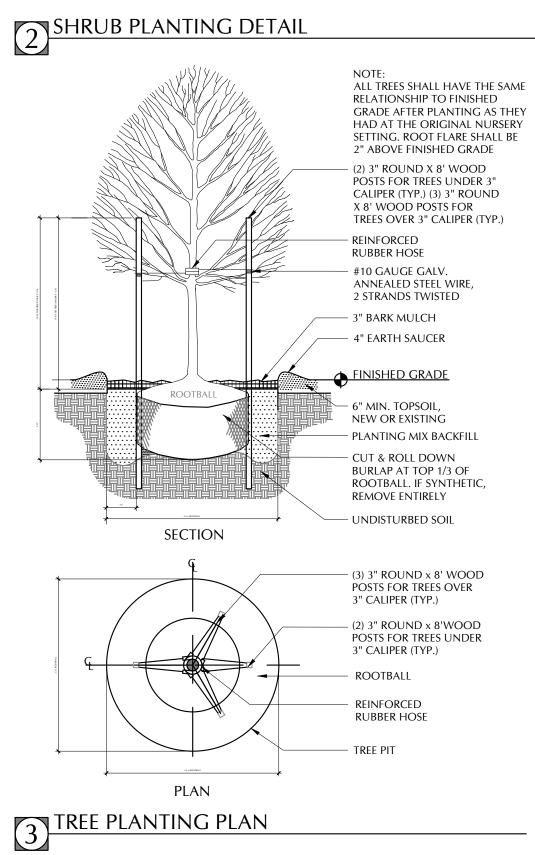
PROPOSED SITE LAYOUT & **MATERIALS** PLAN & DETAIL





82	1 MASSACH	<b>IUSET</b>	TS AVENUE, ARLINGTON MA	PLANT LIST			ROJAS DESIGN, INC.	RD 2958	12/27/2024
	SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS		
	Е	11	EXISTING TREE	EXISTING TREE	IN PLACE	TO REMAIN	PROTECT AS REQUIRED - PROVIDE	CLASS 'A' PRUNING AS	DIRECTED BY L.A.
	R	8	REMOVE TREE	REMOVE TREE	EXISTING	REMOVE	REMOVE TREE AND STUMP IN THEI	R ENTIRETY	
щ	Т	1	TRANSPALNTED TREE - MAPLE TREE	TRANSPLANTED TREE	EXISTING	TRANSPALNTED	TRANSPLANT TREE, LOCATION AS S	SHOWN ON DRAWING	S
뿔	GTI	4	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	3"-3 1/2" CAL.	B & B	PRUNE BRANCHING TO 6'-0" ABO\	/E FINISHED GRADE	
1-	PXA	9	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	3"-3 1/2" CAL.	B & B	PRUNE BRANCHING TO 6'-0" ABO\	/E FINISHED GRADE	
	TLL	1	TILIA CORDATA	LITTLE LEAF LINDEN	3"-3 1/2" CAL.	B & B	PRUNE BRANCHING TO 6'-0" ABO\	/E FINISHED GRADE	
	CPA	16	CHAMAECYPARIS PISIFERA 'FILIFERA AUREA'	GOLDEN THREADLEAF CYPRESS	2'-0" - 2'-6" SPREAD	B & B	YELLOW/GOLD COLOR YEAR-ROU	ND - BROAD DOME FOR	RM - SPACING @ 2'-0" O.C EVERGREEN
	DVW	31	RHODODENDRON 'DELAWARE VALLEY WHITE'	'DELAWARE VALLEY WHITE' AZALEA	2'-6" - 3'-0" TALL	B & B	WHITE FLOWERS - BLOOMS APRIL -	MAY - SPACING AT 2'-6	5" O.C EVERGREEN
	IGC	35	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	2'-6" - 3'-0" TALL	B & B	EVERGREEN DENSE MOUNDED FOR	RM - SPACING AT 2'-6" C	D.C.
88	PBB	16	PIERIS 'BROWERS BEAUTY'	BROWER'S BEAUTY ANDROMEDA	2'-6" - 3'-0" TALL	B & B	CREAMY WHITE FLOWER - BLOOMS	S LATE APRIL SPACING A	AT 2'-6" O.C.
I⊋	PJM	18	RHODODENDRON 'PJM'	'PJM' RHODODENDRON	2'-6" - 3'-0" TALL	B & B	MAGENTA FLOWERS - BLOOMS LAT	TE SPRING - EARLY SUMI	MER - SPACING AT 2'-6" O.C EVERGREEN
SHRUBS	RHC	32	RHODODENDRON 'HINO-CRIMSON'	HINO-CRIMSON AZALEA	2'-6" - 3'-0" TALL	B & B	FUCHSIA FLOWERS - BLOOMS LATE	SPRING EARLY SUMME	R - SPACING AT 2'-6" O.C EVERGREEN
١,	SBM	12	SPIRAEA X BUMALDA 'ANTHONY WATERER'	SPIREA BUMALDA 'ANTHONY WATERER'	2'-6" - 3'-0" TALL	B & B	SMALL WHITE FLOWERS - BLOOMS	IN MAY SPACING AT 21	-6" O.C.
	TCG	22	TAXUS CUSPIDATA 'GREENWAVE'	GREENWAVE JAPANESE YEW	2'-6" - 3'-0" SPREAD	B & B	EVERGREEN WITH LOW MOUNDIN	G FORM SPACING AT 2	'-6" O.C.
	LSP	340	LIRIOPE SPICATA	CREEPING LIRIOPE	12" SPREAD	1 GAL	FLOWERS LATE SUMMER WITH PAL	E VIOLET FLOWERS - SP.	ACING 8 PLANTS PER 10 SF OF BED
ES	MSS	3	MISCANTHUS SINENSIS 'STRICTUS'	ZEBRA GRASS	4'-0" - 7'-0" TALL	3 GAL	GREEN AND YELLOW BANDED BLA	NDES WITH YELLOW FLO	OWERS - BLOOMS JULY - SEPTEMBER
S	PAF	12	PENNISETUM ALOPECUROIDES	FOUNTAIN GRASS	2'-6" - 5'-0" TALL	3 GAL	FOUNTAIN SHAPED FORM WITH D	ARK GREEN BLADES AN	D BUFF WHITE FLOWERS IN JULY - OCTOBER
≥	PAH	12	PENNISETUM ALOPECUROIDES 'HAMELIN'	DWARF KARLY ROSE FOUNTAIN GRASS	1'-6" - 2'-6" TALL	3 GAL	DENSE CLUMPED GROWTH WITH I	JPRIGHT MOUNDS OF	PURPLE FLOWERS
	SGS	10	MISCANTHUS SINENSIS 'GRACILLIMUS'	SILVER OR EULALIA GRASS	4'-0" - 7'-0" TALL	3 GAL	UPRIGHT FORM WITH FEATHERY C	REAM FLOWERS - BLOC	MS IN LATE SEPTEMBER - OCTOBER
									<u> </u>
G.C.	SL	470			PEARL'S PREMIUM	6" CLEAM LOAM	SLICE SEEDING OR HYDROSEEDING	FOR FULL COVERAGE	OF NOTED AREAS AND ALL AREAS DISTURBED BY
ΙĞ	J.	SY	SEEDED LAWN	SEEDED LAWN	SUN-SHADE MIX	MIX	CONSTRUCTION AND LANDSCAPE	NG (TYP.)	



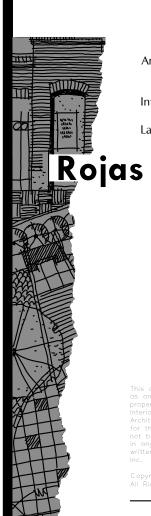


MASSACHUSETTS
AVENUE
ARLINGTON MA
02476

ARLINGTON
REDEVELOPMENT
BOARD SUBMISSION

Job: 2958
Date: 12/30/2024
Scale: AS NOTED
Drawn: ISP
Checked: ATR

PROPOSED
PLANTING PLAN
& PLANT LIST



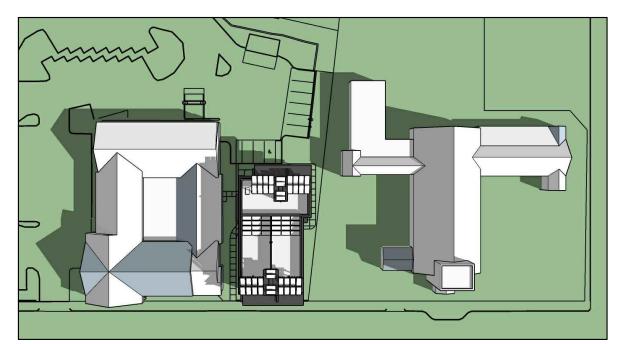
Rojas Design, Inc.
Architecture
46 Waltham Street Suite 2A
Interior Design
Boston MA 02118
Landscape Architecture
(617) 720-4100

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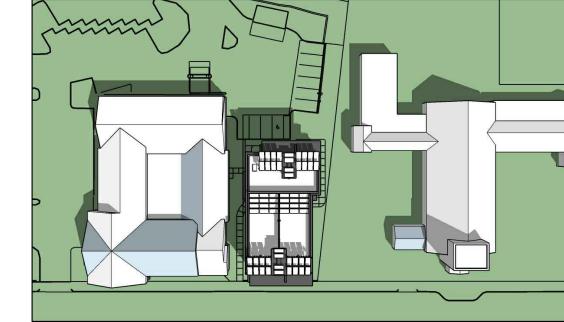
1-03



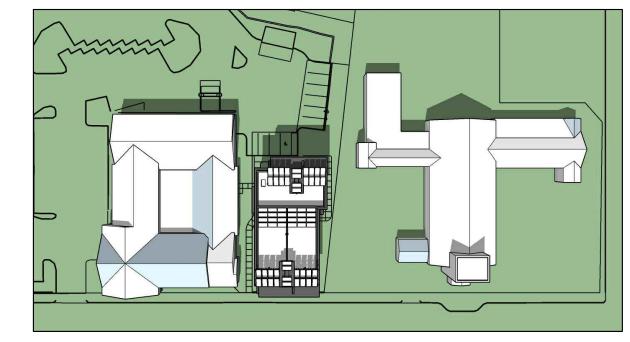
FRONT ELEVATION - 3 STORY



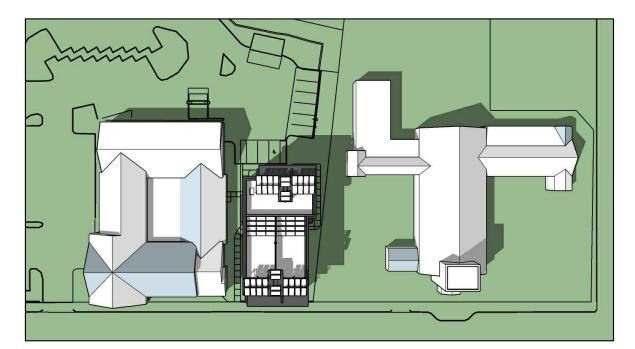
2 SUN SHADOW @ 8:00 AM



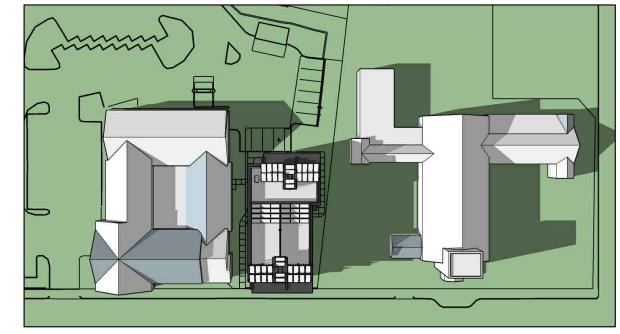
<u>@ 10:00 AM</u>



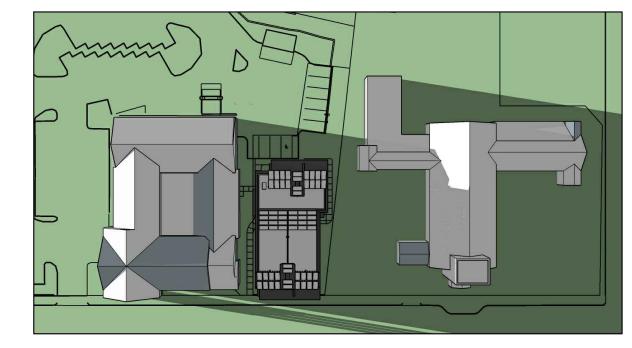
<u>@ 12:00 PM</u>



5 SUN SHADOW @ 2:00 PM



6 @ 4:00 PM



@ 6:00 PM

MASSACHUSETTS
AVENUE
ARLINGTON MA
02476

ARLINGTON REDEVELOPMENT BOARD SUBMISSION

Job:	2958
Date:	12/30/2024
Scale:	AS NOTED
Drawn:	ISP
Checked:	ATR

3-STORY SHADOW STUDY ON 09/04/2024



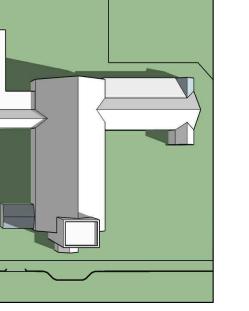
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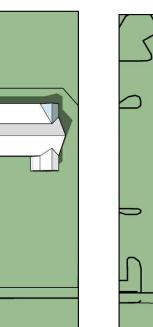
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1-04

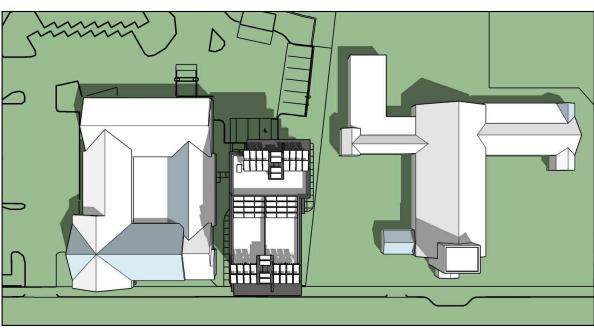


2 SUN SHADOW @ 8:00 AM

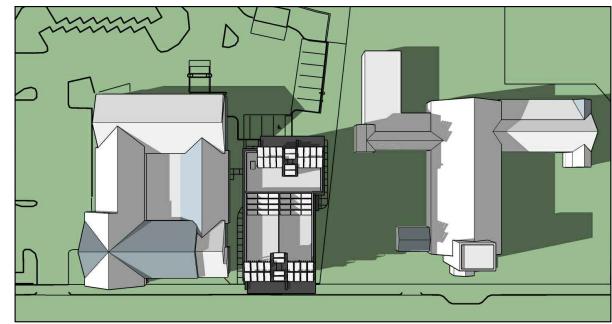




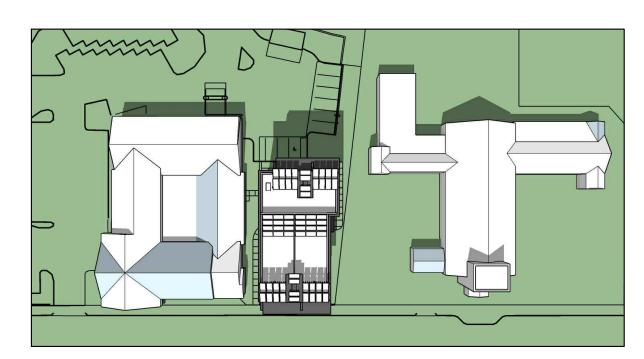
5 SUN SHADOW @ 2:00 PM



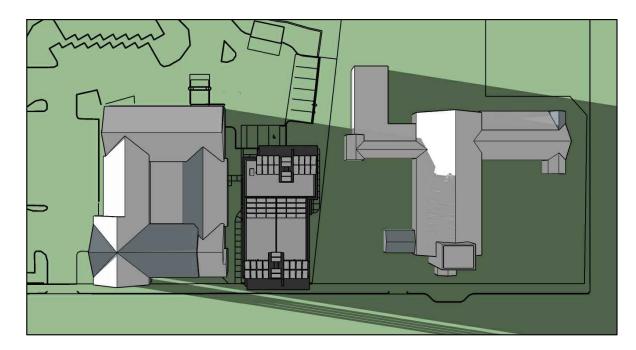
3 @ 10:00 AM



6 <u>@ 4:00 PM</u>



4 @ 12:00 PM



7 @ 6:00 PM

821

MASSACHUSETTS **AVENUE** ARLINGTON MA 02476

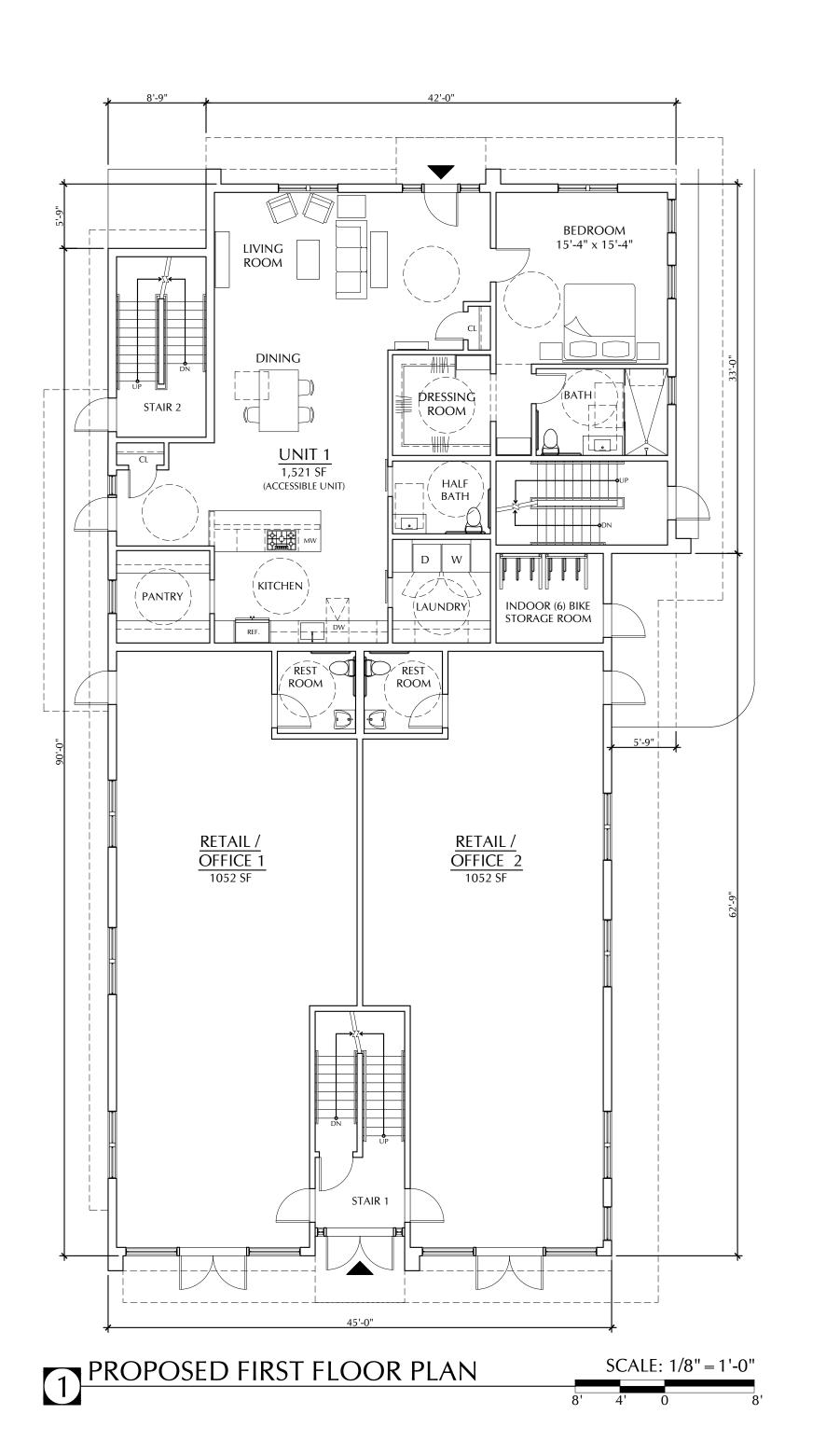
ARLINGTON REDEVELOPMENT **BOARD SUBMISSION** 

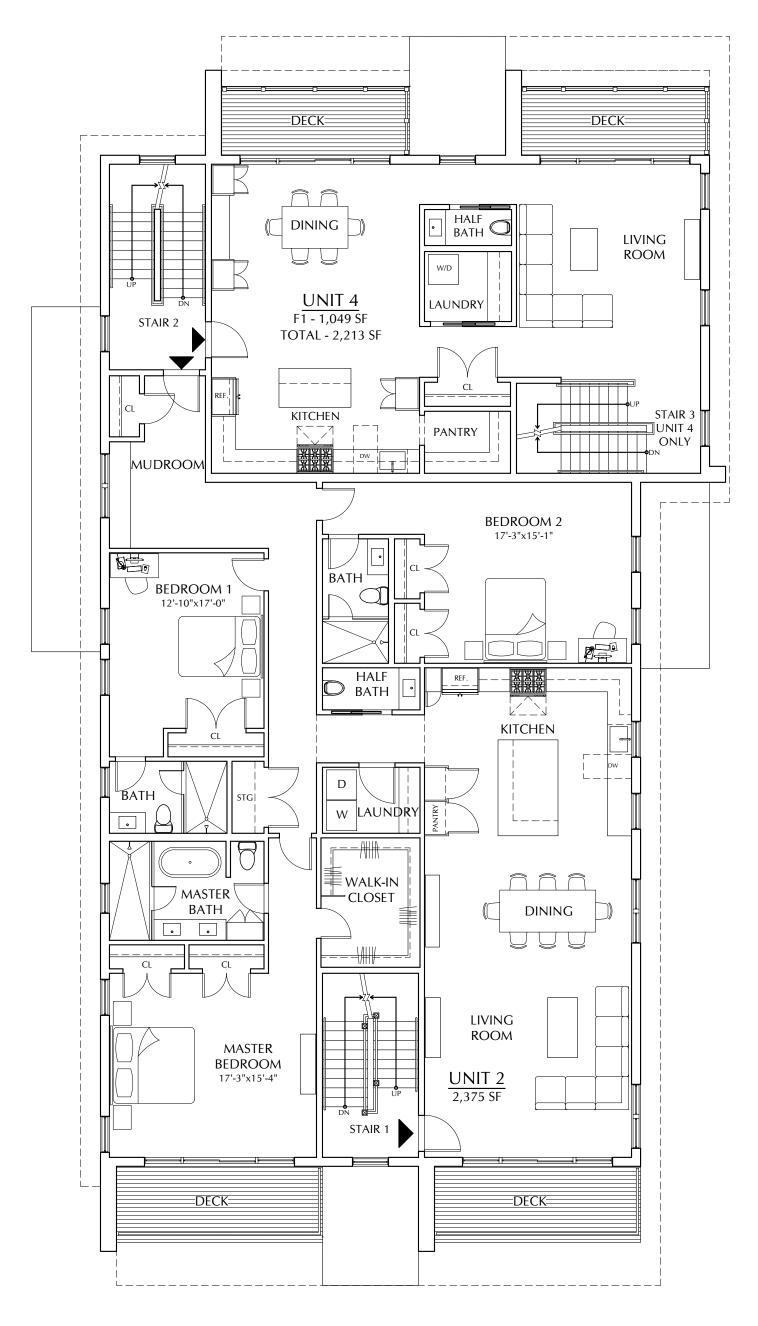
> 2958 12/30/2024 AS NOTED ISP ATR

> > 5-STORY **SHADOW** STUDY ON 09/04/2024

Rojas Design, Inc. 46 Waltham Street -Suite 2A Boston MA 02118 Landscape Architecture Rojas (617) 720-4100

L-05





MASSACHUSETTS AVENUE ARLINGTON MA 02476

ARLINGTON
REDEVELOPMENT
BOARD SUBMISSION

Job:	2958
Date:	12/30/2024
Scale:	AS NOTED
Drawn:	ISP
Checked:	ATR

PROPOSED FIRST FLOOR & SECOND FLOOR PLANS

Architecture

Rojas Design, Inc.

46 Waltham Street -

Boston MA 02118 Landscape Architecture

(617) 720-4100

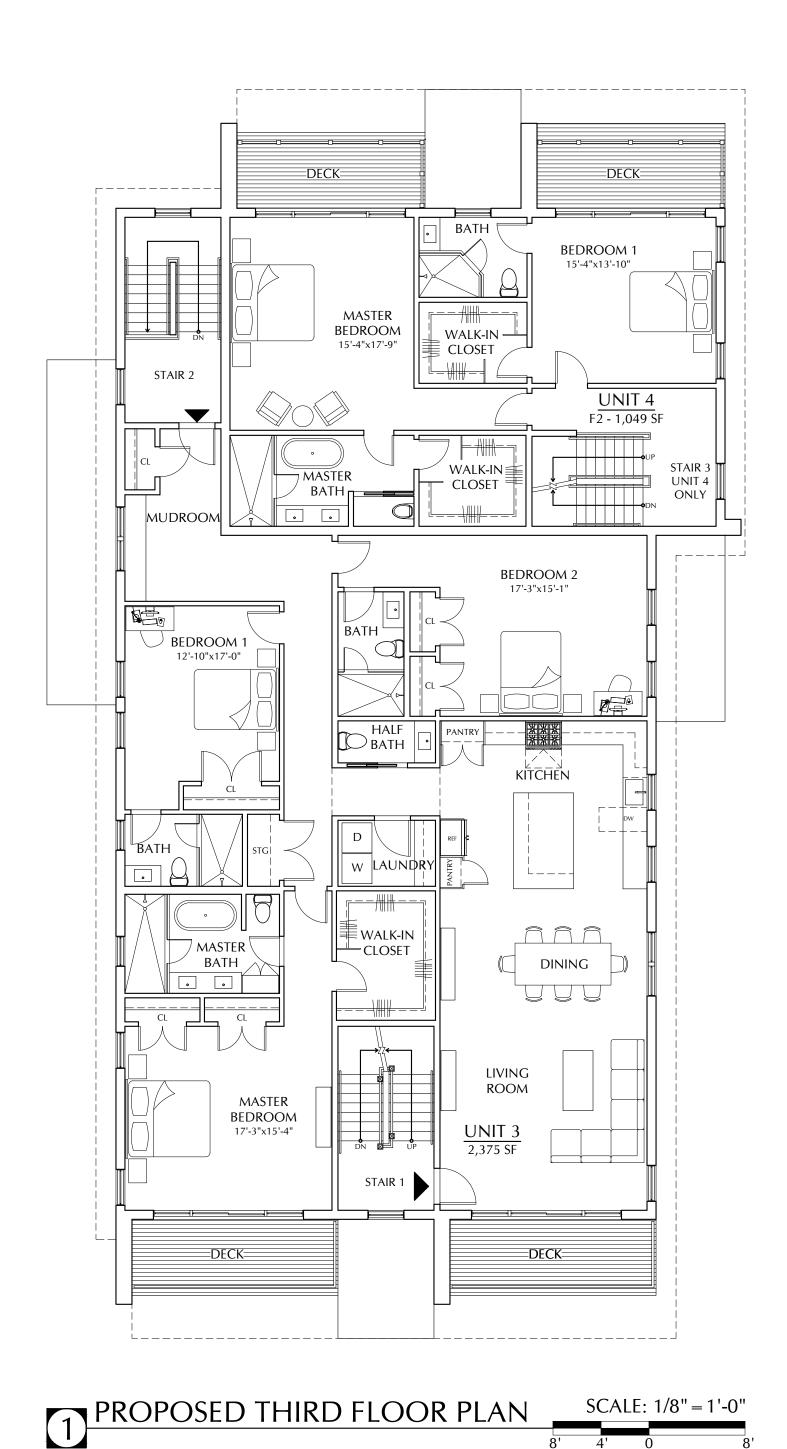
Suite 2A Interior Design

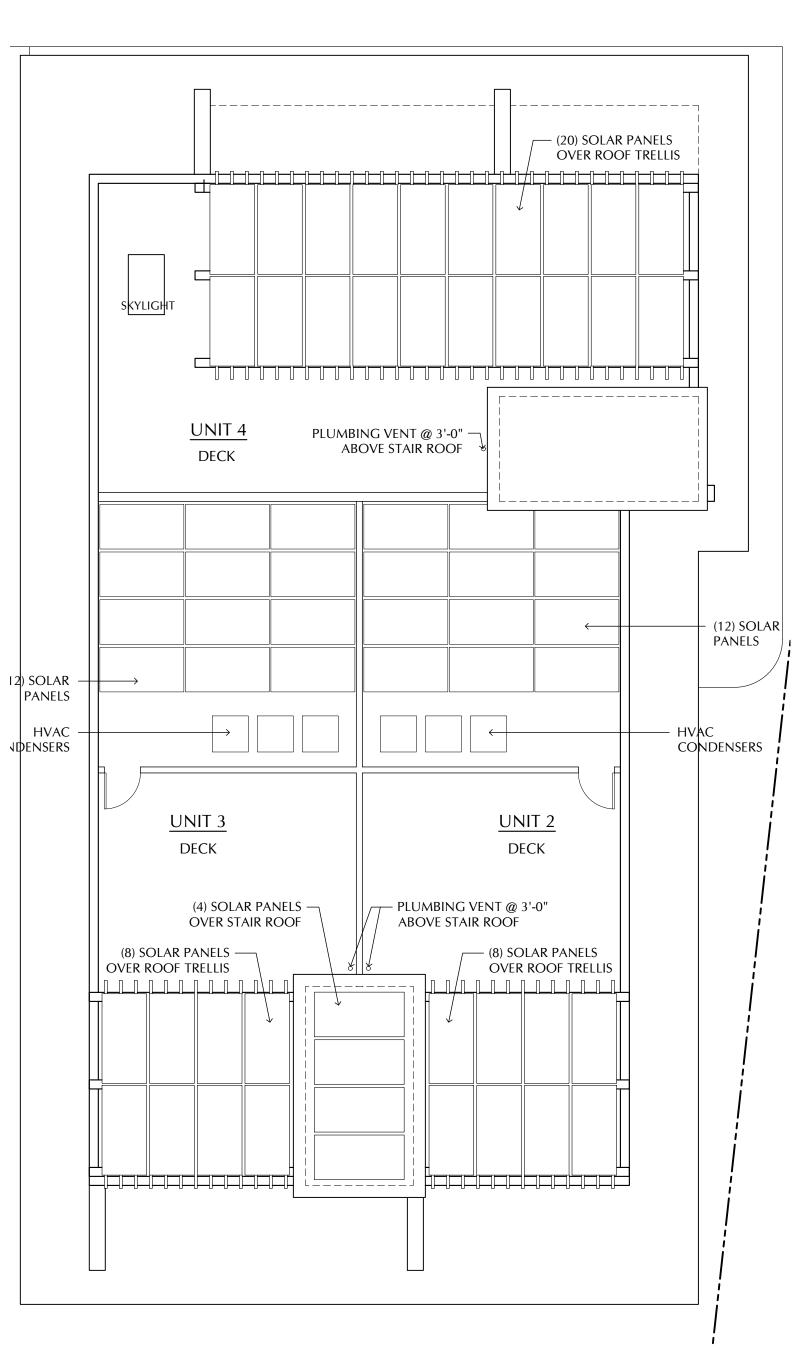


PROPOSED SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

8' 4' 0 8'





MASSACHUSETTS AVENUE ARLINGTON MA 02476

ARLINGTON
REDEVELOPMENT
BOARD SUBMISSION

 Job:
 2958

 Date:
 12/30/2024

 Scale:
 AS NOTED

 Drawn:
 ISP

 Checked:
 ATR

PROPOSED
THIRD FLOOR
& ROOF PLAN

Architecture

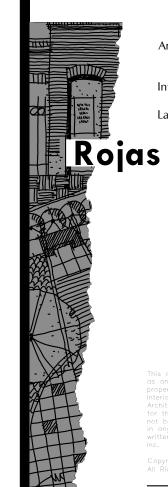
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Boston MA 02118 Landscape Architecture

(617) 720-4100

Suite 2A

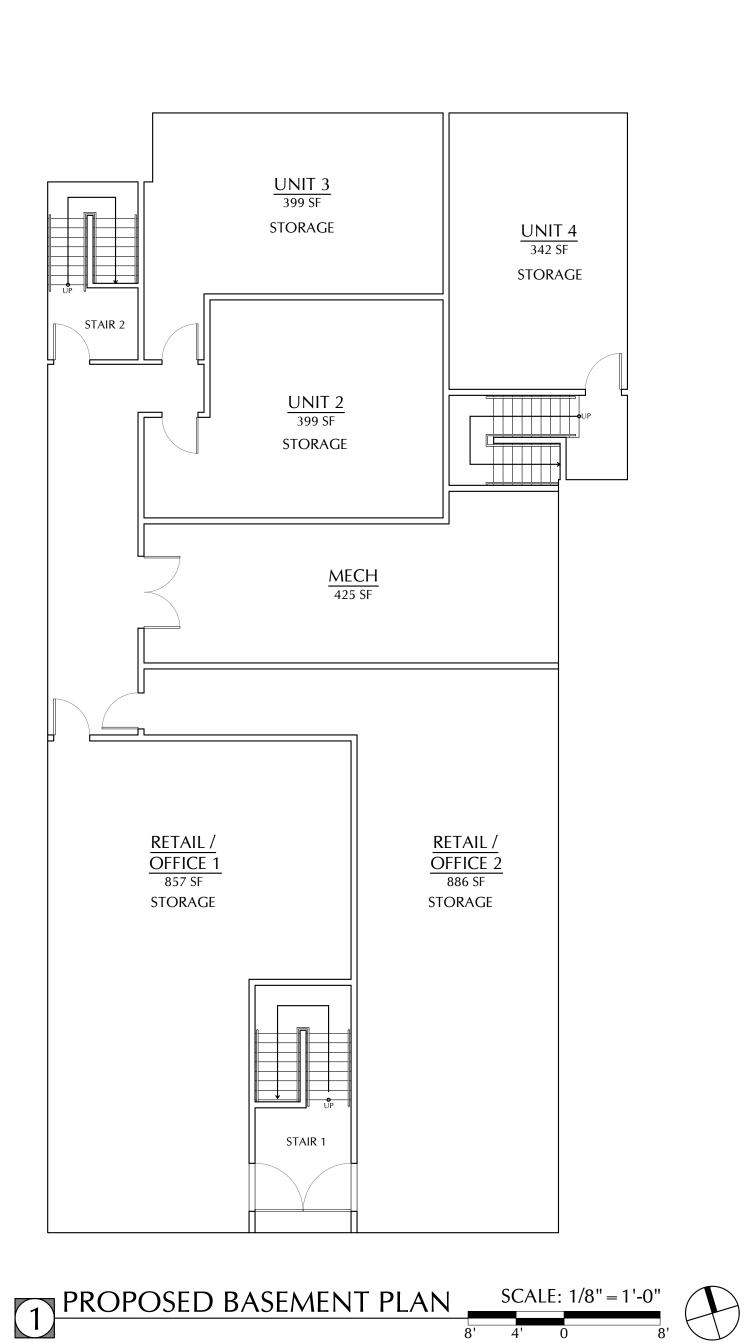


PROPOSED ROOF PLAN

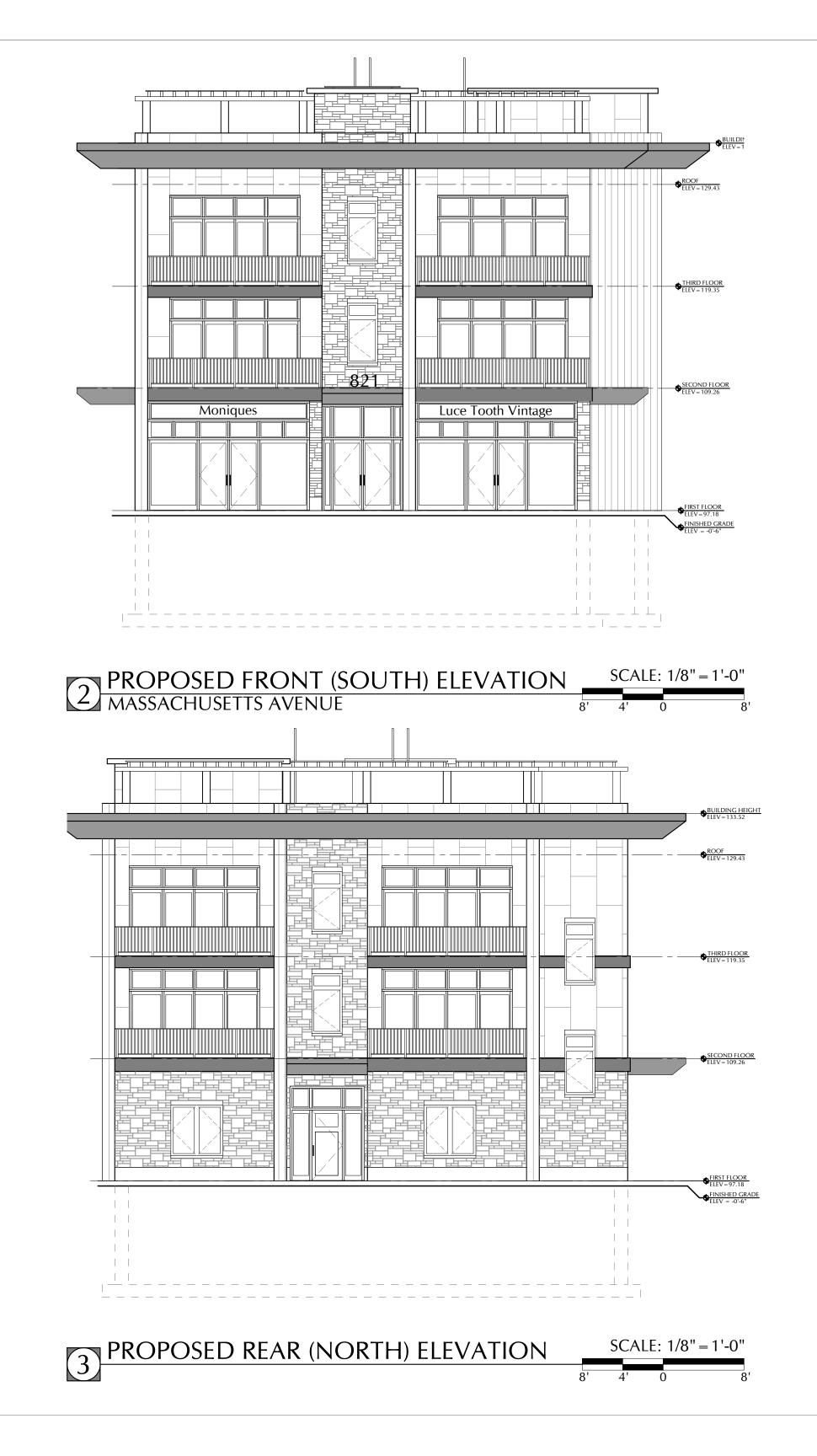
SCALE: 1/8" = 1"

REFER TO SOLAR PACKAGE FOR
PANEL & SYSTEM SPECIFICS





174 of 226



821

MASSACHUSETTS AVENUE ARLINGTON MA 02476

ARLINGTON REDEVELOPMENT BOARD SUBMISSION

Date: 12/30/2024
Scale: AS NOTED
Drawn: ISP
Checked: ATR
PROPOSED
BASEMENT PLAN,
FRONT (SOUTH)
ELEVATION &
REAR (NORTH)
ELEVATION

Rojas Design, Inc.
Architecture
46 Waltham Street Suite 2A
Interior Design
Boston MA 02118
Landscape Architecture
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A-03



ALUMINUM CANOPY 'Longboard Architectural Products' - Extruded Aluminum Panelboard 'Moonstone' ALUMINUM FACADE PANEL 'Longboard Architectural Products' - Extruded Aluminum Panel System 'Bedrock - Speckle Finish' ALUMINUM SOFFIT & FIN 'Longboard Architectural Products' - Extruded Aluminum Soffit Plank & Panel System 'Light National Walnut -Wood Grain Finish' ALUMINUM BAND 'Longboard Architectural ALUMINUM STOREFRONT Products' - Extruded 'Kawneer' - Aluminum Aluminum Panelboard Storefront Entrance System, 'Slate Grey' Doors & Windows 'Black' Anodized Finish STONE FACADE, HEADER & SILL 'Arriscraft' - Stack-Thin Masonry 'Desert Sand' & 'Tan' ALUMINUM RAILINGS 'Railcraft' - Railing & Picket System 'Black' COMPOSITE DECKING 'Timber Tech' - Vintage Collection 'English Walnut' EXTERIOR FINISHES 12/30/2024

821 MASSACHUSETTS AVENUE

ARLINGTON MA 02476

Rojas Design, Inc.

Architecture · Interior Design · Landscape Architecture

# GENERAL NOTES

- 1. EXISTING CONDITIONS SURVEY INFORMATION OBTAINED FROM ROBER SURVEY,
- OWNER/CLIENT ASSUMES ALL RESPONSIBILITY FOR SOURCES AND AUTHORIZATION TO USE ELECTRONIC AND RECORD FILES.
- 2. THE CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION ON THE GROUND AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER IMMEDIATELY FOR A DECISION PRIOR TO CONSTRUCTION.
- 3. ALL AREAS OUTSIDE OF THE LIMIT OF WORK LINES SHALL NOT BE DISTURBED IN ANY MANNER BY THE CONTRACT OPERATIONS. THE CONTRACTOR SHALL KEEP OUT OF THESE AREAS AND PRESERVE THEIR EXISTING CHARACTER.
- 4. INSTALL TEMPORARY EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION FOR APPROVAL BY THE DESIGN ENGINEER.
- 5. PROVIDE SMOOTH TRANSITION AT CHANGES IN GRADE EXCEPT AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
- 6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITY LINES; ACTIVE OR NOT, AND SHALL MAINTAIN A CLOSE AND CONSTANT CONTACT WITH ALL UTILITY COMPANIES INVOLVED. CALL DIG-SAFE 888-344-7233
- 7. ALL ELEVATIONS ARE REFERENCED TO AN NAVD88 DATUM.
- 8. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS, PERMITTING, AND LICENSES ISSUED AT THE FEDERAL. STATE AND LOCAL AGENCIES.
- 9. CONTRACTOR SHALL COORDINATE ALL SITE UTILITY IMPROVEMENTS WITH THE TOWN OF ARLINGTON OFFICIALS.
- 10. ENGINEER IS TO BE CONTACTED BY CONTRACTOR TO PERFORM AS BUILT MEASUREMENTS.
- 11. OWNER/DEVELOPER IS TO COMPLY WITH ALL OF MASSACHUSETTS DEP SITE DEVELOPMENT REGULATIONS.

# DRAINAGE NOTES

- CONTRACTOR IS RESPONSIBLE FOR THE VERTICAL AND HORIZONTAL CONTROLS OF THE PROJECT.
- CONTRACTOR IS TO REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF BUILDING DOWNSPOUTS.
   THE MINIMUM CLEARANCE FROM THE BOTTOM OF THE SUBSURFACE DRAINAGE SYSTEMS
- TO REFUSAL OR GROUNDWATER IS 24 INCHES.

  4. SYSTEMS WILL REQUIRE PERIODIC INSPECTION.
- 5. STORMWATER RUNOFF SHALL NOT BE DIRECTED ACROSS ADJACENT PROPERTY LINES.

# LAYOUT & GRADING NOTES

- 1. CONSULT ALL DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BETWEEN ALL TRADES PRIOR TO COMMENCING NEW CONSTRUCTION.
- 2. LOCATION OF EXISTING UTILITIES SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL CONTACT THE PROPER AUTHORITIES IN WRITING TO CONFIRM THE LOCATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE INCURRED DURING CONSTRUCTION TO ANY UTILITY SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- 3. CONTRACTOR TO REFER TO A SURVEYOR PLOT PLAN FOR ACCURATE OFFSETS TO PROPERTY LINE.

SOIL TEST DATA
Performed by Gala Simon Associates, Inc., on 9/5/24

Horizon	Depth	Color	Texture	Mottles	$\it 0ther$	Elevation
C1	120"	N/A	FILL	-	-	86.9
C	128"	10YR5/4	LS	-	-	86.2
NO WATE	R, NO MO	TTLING AND N	O REFUSAL			
TH2 (EL	. 96.5)					
Horizon	Depth	Color	Texture	Mottles	$\it 0ther$	Elevation
C1	111"	N/A	FILL	-	-	87.3
C	115"	10YR6/6	CS	-	-	86.9
NO WATE	R, NO MO	TTLING AND N	O REFUSAL			
TH3 (EL	. 97.1)					
Horizon	Depth	Color	Texture	Mottles	$\it 0ther$	Elevation
A/B	25"	N/A	FILL	_	_	95.0
C1	77"	10YR5/4	LS	-	-	90.7
C2	100"	10YR5/3	CS	_	_	88.8

# AS BUILT NOTE:

CONTRACTOR IS TO CONTACT ENGINEER FOR AS-BUILT MEASUREMENTS PRIOR TO BACK FILLING DRAINAGE SYSTEMS.

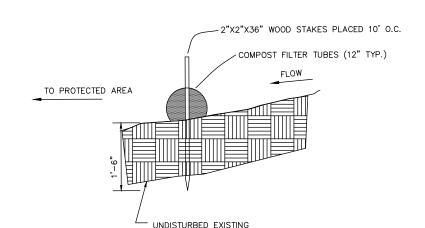
# **UTILITY NOTES:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THIS PLAN, PRIOR TO ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BEFORE PROCEEDING WITH THE WORK.

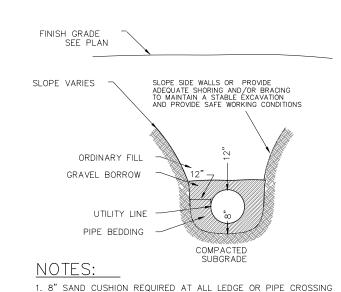
THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATERGATES, ETC. AND COMPILED FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, ALL UTILITY COMPANIES OR AGENCIES PRIOR TO ANY EXCAVATION WORK. CALL DIGSAFE AT 1-800-322-4844

## SAFETY NOTE:

CONTRACTOR IS TO IMPLEMENT ALL NECESSARY SAFETY
AND CONSTRUCTION MEASURES AND PROCEDURES FOR
THE CONSTRUCTION OF THE PROJECT. STRICT
COMPLIANCE WITH FEDERAL, STATE AND LOCAL SAFETY
AND CONSTRUCTION REQUIREMENTS IS MANDATORY.

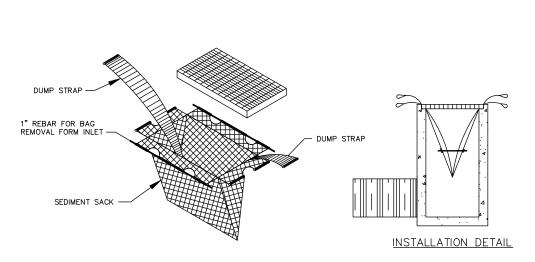


1 EROSION CONTROL



2. NO STONE GREATER THAN 3" TO BE PLACED OVER PIPE TO FINISH GRADE 3. NO STONE GREATER THAN 3" WITHIN 12" OF PIPE. 4. GRAVEL BORROW SHALL COMPLY WITH MHD M1.03.0 TYPE C 5. PIPE BEDDING SHALL COMPLY WITH MHD M1.04.1



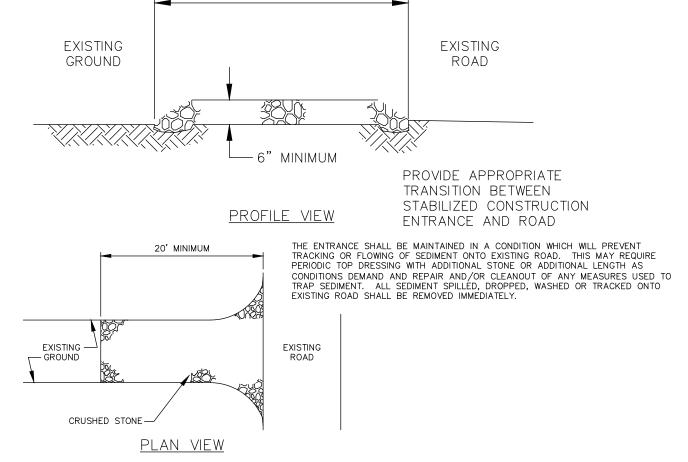


NOTES:

1. SOME MUNICPALITIES DO NOT ALLOW GUTTER PROTECTION ON PUBLIC ROADS. SILT BAGS SHOULD BE USED WITH THESE CASES.

2. BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.





20' MINIMUM

4 STABILIZED CONSTRUCTION ENTRANCE
C-0 SCALE: NTS

NOT FOR CONSTRUCTION

on Inc.

4ssociates Inc.
WELL STREET, SUITE

STING CONDITIONS
PI AN

821 MASSACHUSETTS A VENUE IRLINGTON, MASSACHUSETTS

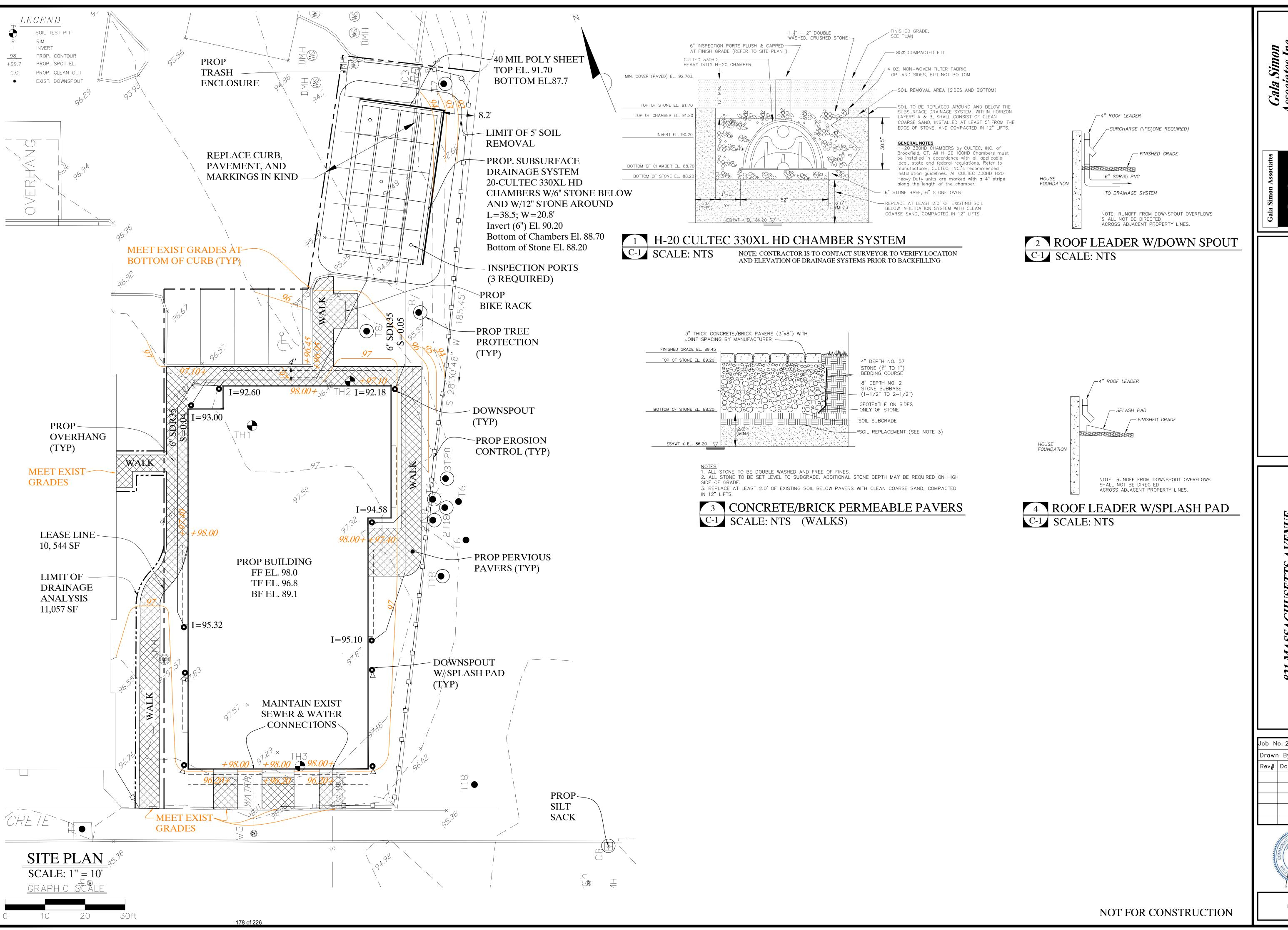
Job No. 2422 Date: 9/6/2024

Drawn By: AG Scale: AS SHOW

Rev# Date: Description:



C-01



Cala Simon
Associates Inc.
LOWELL STREET, SUITE 18
LEXINGTON, MA 02420
Tel: (781) 676-2962

Civil Engineers

OPOSED CONDITIONS DRAINAGE PLAN

821 MASSACHUSETTS A VENUE ARLINGTON, MASSACHUSETTS

Job No. 2422 Date: 9/6/2024

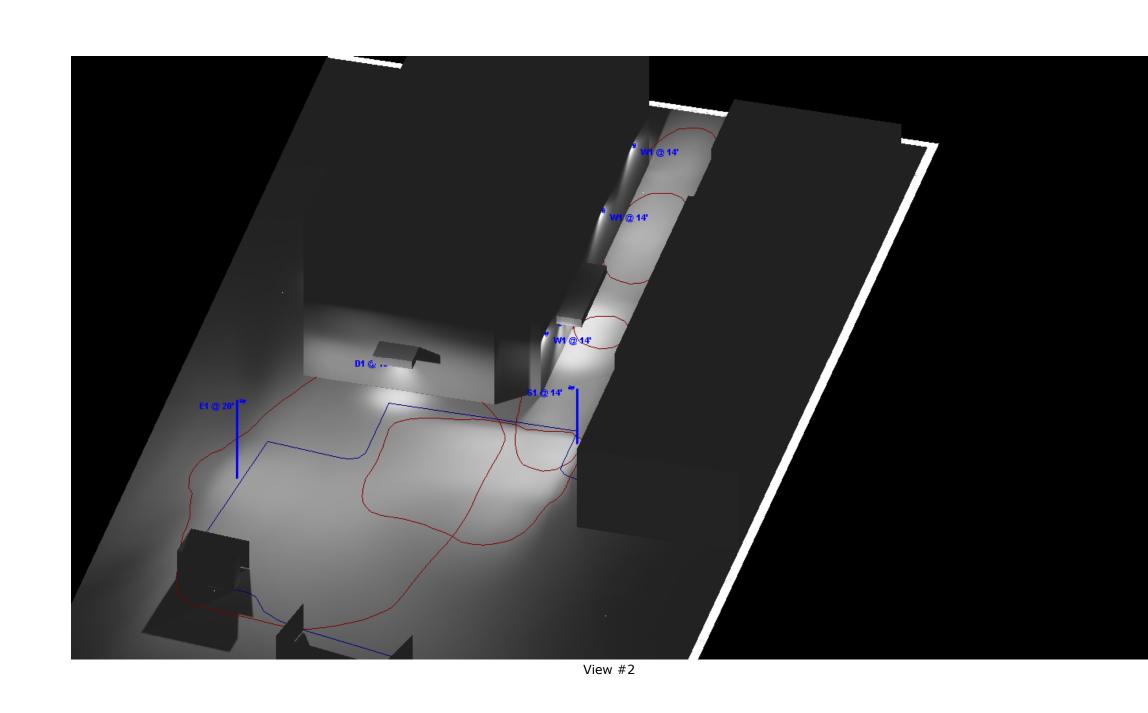
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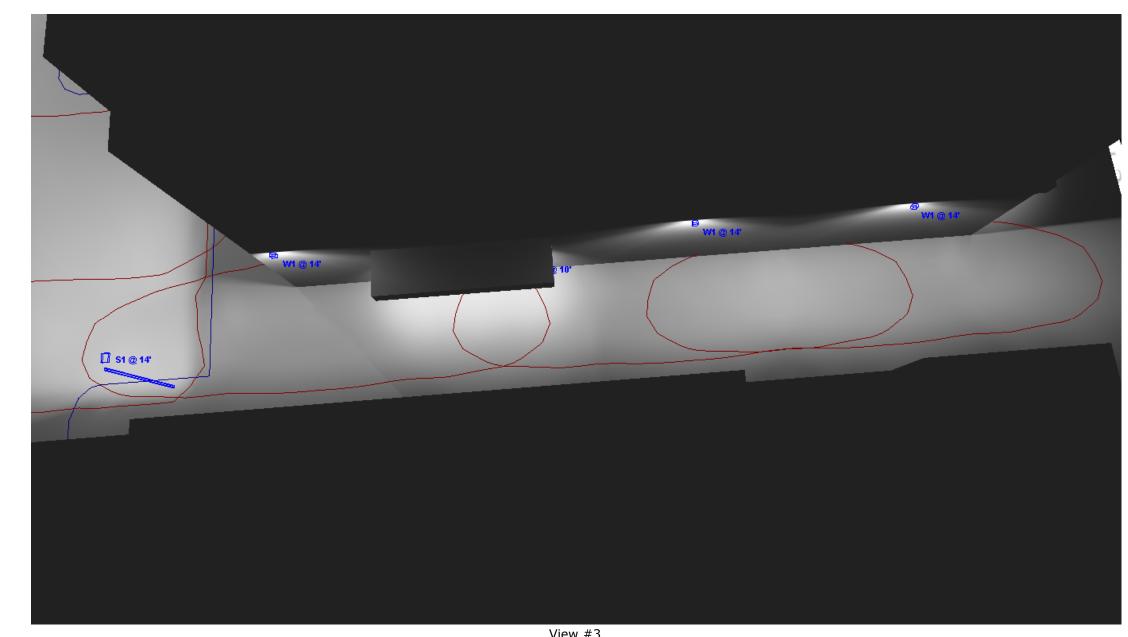
Rev# Date: Description:

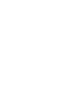
ALBERTOM:

ONLY ALBERTOM:

C - 02









Series



- Fixture Mounting Height: E1 @ 20' S1 @ 14' \$2 @ 3'

W1 @ 12'

D1 @ 10'

- Task Height: 0'-0" AFF

- Calculation Point Spacing: 4' x 4' oc

SCHE	DULE						
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Light Loss Factor	Wattage
	D1	8	Gotham	EV02 40/07 AR LSS ND GZ10	Recessed 2" diameter LED downlight	0.9	9.6842
	E1	1	Lithonia	DSX0 LED P4 30K 80CRI T4M HS (assumed)	Existing Single head area light mounted at 20'	0.9	93.04
	S1	1	Lithonia	DSX0 LED P2 40K 80CRI RCCO	New Pole Mounted full cutoff area light with sharp right angle cutoff mounted at 14'	0.9	45.14
	W1	3	Lithonia	WDGE2 LED P3 40K 80CRI T1S	New Wall Mounted full cutoff wall pack with Type I optics	0.5	32.1375

<u>Plan View</u> Scale - 1/8" = 1ft

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.2$   $^{+}0.2$   $^{+}0.2$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.2$   $^{+}0.2$   $^{+}0.2$   $^{+}0.2$   $^{+}0.3$   $^{+}0.3$   $^{+}0.3$   $^{+}0.4$   $^{+}0.4$   $^{+}0.4$   $^{+}0.4$   $^{+}0.4$   $^{+}0.4$   $^{+}0.4$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$   $^{+}$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}$ 

0.3 +0.8 +1.6 +1.9 +1.8 +0.4 +0.0

+0.3 +0.8 +1.6 +1.9 +1<sub>E</sub>

| <sup>+</sup>0.3 | <sup>+</sup>0.8 | <sup>+</sup>1.6 | <sup>+</sup>1.8 | <sup>+</sup>1.7 |

0.3 0.8 1.7 2.9 3.1

+0.2 | +0.9 +3.2 +9.1 +0.1 +0.1 +0.2

+0.3 +0.9 / +3.3 +9.3 +11<sub>7</sub>/

+0.2 + 10 +3.2 | 9.2 + 10 10'

0.9 2.8 6.9 8.2

+0.2 - +0.7 +2.1- +3.2 +3.1

+0.2 +0.8 +1.8 +1.8 +1.8

+0.2 +0.9 +2.1 +2.4 +2.0

0.2 + 2.3 + 2.7 - + 2.2

<sup>+</sup>0.2  $\sqrt{1.0}$  <sup>+</sup>2.6  $\sqrt{3.1}$  <sup>+</sup>2.4

+0.2 1.0 +2.8 +3.5 +2.8

+0.2 +1.0 +2.5 +2.9 +2.3

+0.2 +1\0 +2.2 +2.6 +2.1

+0.2 +0.8 +1.7 +2.0 +1.7

†0.2 †0.7 †1.6 †2.1 †1.8

REPLACED +0.3 | 0.7 +2.6 | 7.2 +9.0

LANDSCAPE W1 @ 14'

 $^{+}0.2$   $^{+}0.5$   $^{+}1.9$   $^{+}2.8$   $^{+}3.1$   $^{+}3.0$   $^{+}2.8$   $^{+}2.7$   $^{+}2.5$   $^{+}2.4$   $^{+}2.2$   $^{+}2.0$   $^{+}1.9$   $^{+}1.8$   $^{+}1.9$   $^{+}1.9$   $^{+}1.8$   $^{+}1.5$   $^{+}0.7$   $^{-}0.5$   $^{+}0.4$   $^{+}0.3$   $^{+}0.2$ 

 $^{+}0.2$   $^{+}0.9$   $^{+}3.3$   $^{+}4.2$   $^{+}4.3$   $^{+}3.9$   $^{+}3.6$   $^{+}3.2$   $^{+}2.8$   $^{+}2.5$   $^{-}2.2$   $^{+}1.9$   $^{+}1.8$   $^{-}1.7$   $^{+}1.6$   $^{+}1.7$   $^{+}1.6$   $^{+}1.4$   $^{+}1.1$   $^{+}0.5$   $^{-}0.4$   $^{+}0.3$   $^{+}0.2$   $^{+}0.1$ 

 $^{+}0.3$   $^{+}0.7$   $^{+}5.6$   $^{+}4.9$   $^{+}4.3$   $^{+}5$   $^{+}0$   $^{+}4.5$   $^{+}3.9$   $^{+}3.1$   $^{+}2.5$   $^{+}1.9$   $^{+}\cancel{\chi}$ .7  $^{+}1.5$   $^{+}1.2$   $^{+}1.0$   $^{+}1.0$   $^{+}0.9$   $^{+}0.7$   $^{+}0.4$   $^{+}0.2$   $^{+}0.2$   $^{+}0.2$   $^{+}0.1$   $^{+}0.1$   $^{+}0.1$ 

ROOM 1

OFFICE 2 1240 SF

3,441 TOTAL SE

ROOM

+0.2 +0.1 +0.0 +0.0 +0.0 +0.0

+0.1 +0.1 +0.0 +0.0 +0.0 +0.0 +0.0

0.1 0.1 0.0 0.0 0.0 0.0

0.1 +0.0 +0.0 +0.0 +0.0 +0.0

<sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0 <sup>+</sup>0.0

†0.0 †0.0 †0.0 †0.0 †0.0 †0.0

+6.3 +5.4 +1.2 +0.1 +0.0 +0.0 +0.0 +0.0 +0.0

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$ 

 $^{+}0.0$   $^{-+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$ 

 $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$   $^{+}0.0$ 

1.3 +1.2 +0.4 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0

7.8 +6.6 +1.4 +0.2 +0.0 +0.0 +0.0 +0.0 +0.0

+0.1 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0

REVISED 6" x 18"

LIGHT FIXTURE

BITUMINOUS

ACCESSIBLE

PARKING SPACE

EXISTING CONCRETE ----

(FROM CVS) TO BE

NEW 5'W CONCRETE ---

WALKWAYS (TYP.)

PLANTING

AREAS (TYP.)

CVS

BUILDING

(EXISTING)

EXISTING FRONT GRANITE CURB —

TO BE REUSED & RESET (TYP.)

SIDEWALKS TO REMAIN (TYP.)

WALKWAY

PARKING AREA TO ACCOMMODATE

EXPANDED -

GRANITE CURB (TYP.)

NEW POLE MOUNTED -

### KRATTENMAKER O'CONNOR & INGBER P.C.

ATTORNEYS AT LAW

ONE MCKINLEY SQUARE BOSTON, MASSACHUSETTS 02109 TELEPHONE (617) 523-1010 FAX (617) 523-1009

January 6, 2025

CHARLES G. KRATTENMAKER, JR. MARY WINSTANLEY O'CONNOR KENNETH INGBER

OF COUNSEL: RAYMOND SAYEG

#### **VIA EMAIL**

Rachel Zsembery, Chairperson Arlington Redevelopment Board Town of Arlington 730 Massachusetts Avenue Arlington, Massachusetts 02476

Re: 821-837 Massachusetts Avenue, MA (the "Site") - Docket No. 3798

Dear Chairperson Zsembrey:

Pursuant to the request of the ARB I submit the following letter which addresses the prohibited uses on the site at 821-837 Massachusetts Avenue, Arlington, Massachusetts and the use of the egress and ingress on the Site.

Pursuant to the lease by and between Noyes Realty, LLLP, and Massachusetts CVS Pharmacy, LLC (hereinafter referred to as the "Lease", "Landlord and "Tenant", respectively), Landlord is prohibited from leasing 821 Massachusetts Avenue to any business such as: a store selling health and beauty aids (which is defined as a store which devotes more than five percent (5%) of its retail space to the display and sale of health and beauty aids), a store selling greeting cards, gifts, vitamins and/or candy, any store offering one-hour or other on-site photo processing, a pharmacy mail order facility, a drugstore, a dollar store and/or a pharmacy prescription department, which shall include the dispensing of prescription drugs by physicians, dentists, or other healthcare practitioners, and/or entities such as health maintenance organizations, where such dispensing is for profit.

With respect to the Site, which includes the two properties, 821 and 837 Mass Ave, the Site has been developed as one project site under ARB Docket No. 3348. The ARB's decision provides that on the Site behind 821 Mass Ave there shall be ten (10) parking spaces reserved for 821 Mass Ave's use. Special Condition No. 5. These spaces are located on the 837 Mass Ave parcel for use by 821 Mass Ave and, pursuant to the lease, these dedicated spaces are maintained by the Tenant.

### KRATTENMAKER O'CONNOR & INGBER P.C.

Rachel Zsembery, Chairperson Arlington Redevelopment Board Town of Arlington January 6, 2025 Page 2

The egress and ingress on the 837 Mass Ave parcel is not exclusive to CVS and is for the use of the ten (10) parking spaces reserved for use by 821 Mass Ave.

I thank you.

Very truly yours,

Mary Winstanley O'Connor

MWO/lm

6476



### Town of Arlington, Massachusetts

Department of Planning and Community Development 730 Massachusetts Avenue, Arlington, Massachusetts 02476

### **Public Hearing Memorandum**

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

**To:** Arlington Redevelopment Board

From: Claire V. Ricker, AICP Secretary Ex-Officio

Subject: Environmental Design Review, 821 Massachusetts Avenue, Arlington, MA, Docket #3798

Date: January 2, 2025

#### I. <u>Docket Summary</u>

This is an application by Noyes Realty LLLP, PO Box 40, Marblehead, MA 01945, to open Special Permit Docket #3798 in accordance with the provisions of MGL Chapter 40A § 11, and the Town of Arlington Zoning Bylaw Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

The applicant proposes to demolish the existing building and construct a mixed-use building located at 821 Massachusetts Avenue, Arlington, MA, in the B4 Vehicular Oriented Business District. The opening of the Special Permit is to allow the Board to review and approve the project under Section 3.3, Special Permits, and Section 3.4, Environmental Design Review.

Materials previously submitted for consideration of this application include:

- Application for EDR Special Permit,
- Impact Statement,
- Dimensional and Parking Information,
- Architectural Drawings.
- Drainage Calculation Report
- Fire Department Memo
- Solar Array Study
- LEED NC Checklist
- Shade Report
- Tree Evaluation Letter
- Sketch-up model and video

Addition materials submitted for consideration of this application include:

- Updated Application for EDR Special Permit
- Updated Architectural Drawings
- Updated Sketch-up model and video

#### II. Application of Special Permit Criteria (Arlington Zoning Bylaw, Section 3.3)

#### 1. Section 3.3.3.A.

The use requested is listed as a Special Permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

821 Massachusetts Avenue is located in the B-4: Vehicle Oriented Use District. Regarding the B-4 District, in Section 5.5.1.E., of the Zoning Bylaw states: "Arlington has an abundance of automotive and automotive accessory sales and service establishments. As these businesses gradually close, The Town has encouraged conversion of the property to other retail, service, office, or residential use, particularly as part of a mixed-use development." Mixed-use residential and office space development is allowed in the B4 District. The Board can find that this condition is met.

#### 2. Section 3.3.3.B.

The requested use is essential or desirable to the public convenience or welfare.

The requested use is essential and desirable. The Master Plan promotes mixed-use developments as a means to revitalize business districts, by bringing customers and street life to commercial areas. From a land use perspective, the Master Plan encourages development of higher value mixed-use buildings along commercial corridors, especially Mass Ave, by allowing taller buildings and reducing off-street parking requirements. The Board can find that this condition is met.

#### 3. Section 3.3.3.C.

The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

The proposed project includes ten parking spaces for cars, located on the ground level of the property, composed of nine standard parking spaces and one ADA accessible parking space. Parking and traffic flow will be blended with the traffic and parking activities at the abutting address, 833 Mass Ave (CVS), with the proposed new building utilizing the entry and exit curb cuts. Parking for the development will be located behind the new building. The Board can find that this condition is met.

#### 4. <u>Section 3.3.3.D.</u>

The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.

Drainage calculations were included in the submission that indicate site stormwater run-off will be improved via the project. Additionally, the project narrative states that site design for the parcel shall include proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. The project will employ Best

Management Practices for the site including determination of the feasibility of installing an underground filtration system beneath the parking area. A landscaped buffer will be introduced on the site and several trees will be planted. Overall, the narrative and report indicate that the project should result in a reduction in the quantity of stormwater flowing from the site. The Board can find that this condition is met.

#### 5. Section 3.3.3.E.

Any special regulations for the use as may be provided in the Bylaw are fulfilled.

Any special regulations for the use that may be provided in the Bylaw will be fulfilled. The Board can find that this condition is met.

#### 6. Section 3.3.3.F.

The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals, or welfare.

The project proposes ground floor office use with four residential units located at the ground floor and above, uses that have been in this location since at least 1911 when Dr. Charles Atwood opened a medical office in his residence at 821 Mass Ave. The replication of commercial office space and residential units is described in the definition of the B4 zoning district as desirable; the definition specifically states, "the Town has encouraged conversion of the property to other retail, service, office, or residential use, particularly as part of mixed-use development." In particular, this proposal both increases overall commercial space on the property and provides new housing. These additions will not impair the integrity or character of the district, or the adjoining districts and it will not be detrimental to health or welfare. The Board can find that this condition is met.

#### 7. Section 3.3.3.G.

The requested use will not, by its addition to a neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

There will be no excess of mixed-use in the neighborhood as a result of this development, rather the Applicant's proposal will comport with the objectives of the Master Plan to maintain a mixed-use component along Mass Ave. Furthermore, the proposed mixed-use building will not be detrimental to the character of the neighborhood in which the property is located. The Board can find that this condition is met.

#### III. Environmental Design Review Standards (Arlington Zoning Bylaw, Section 3.4)

#### 1. EDR-1 Preservation of Landscape

The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

The project proposes to remove eight existing trees and plant nine street trees every 25' along the entire property line, including the CVS lease area. The existing parking area "side buffer" tree plantings shall remain, and all landscape areas facing the abutters shall be enhanced and improved with new plantings. The existing landscape shall be preserved, as far as practicable. This project minimizes tree and soil removal, and all grade adjustments are in keeping with the general appearance of neighboring developed areas. The Board can find that this condition is met.

#### 2. EDR-2 Relation of the Building to the Environment

Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

There are a range of architectural styles and zoning districts in the vicinity, ranging from single- and two-family homes to apartment buildings, and from single-story commercial to mixed-use developments. Building heights in the area vary from one to four stories and have a variety of setbacks in relationship to their street frontage. The proposal will bring the building closer to the street, improving its relationship to the public realm. The new building's setbacks are consistent with the abutters' setbacks. The proposed new building will relate harmoniously to the lot's terrain and to the use, scale, setbacks, and architecture of the existing buildings in the vicinity that have a functional or visual relationship to the building. The Board can find that this condition is met.

#### 3. EDR-3 Open Space

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

The proposal includes approximately 5,600 square feet of landscaped open space along the sides and rear of the building, which also provides a buffer with the adjacent buildings at 833 Mass Ave (CVS) and the Baptist Church at 815 Mass Ave. The total residential floor area is approximately 8,500 square feet, therefore over 50% landscaped open space is proposed, exceeding the 10% requirement. The Applicant will add three street trees immediately in front of the building and six additional street trees along the Massachusetts Avenue property line. The usable open space is located at ground level and on separated roof decks totaling approximately 4,200 square feet.

Additionally, under this proposal the Applicant will likely require relief from the required 15-foot buffer in Section 5.3.21, as the Baptist Church property adjacent to the project is located in an R1 district and a landscaped buffer is precluded by the building footprint. Section 5.3.21 refers to Section 5.3.7, of which subsection B refers to the screening provisions laid out in Section 6.1, of which Section 6.1.11(E) lays out conditions under which the landscaping standards may be modified. Under this latter section, the Board may find that the proposal has adequately adopted reasonable measures to meet the intent of the standards and also provided landscaped space at another location in the parking lot.

#### 4. EDR-4 Circulation

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

The proposed project includes a total of nine vehicle parking spaces. Three short-term and six long-term bicycle parking spaces shall also be provided. Each commercial and residential unit has designated basement storage area where bicycles may also be stored. The ground-level parking area provides nine standard parking spaces for vehicles, and one van-accessible HP vehicle space. Parking access is provided via Mass Ave; however, vehicles will utilize the curb cut at 833 Mass Ave (CVS) and proceed through the CVS parking area to access the parking behind the new building. Additional onstreet parking is available along Mass Ave.

The vehicle parking requirement for mixed-use development calculates the parking required for each individual use; the parking required for the residential use totals four parking spaces. As the first 3,000 square feet of non-residential space in mixed-use buildings is exempt from the parking requirements per Section 6.1.10.C., no parking is required for the commercial space, however the applicant shall provide five additional vehicle parking spaces.

Similarly, the bicycle parking requirement for mixed use calculates the required bicycle parking for each use. The project proposes three short-term and six long-term bicycle parking spaces. Short-term bicycle parking requirements for each use are met with the provision of three ring-style bike racks at the rear of the building. Regarding long-term parking, per 6.1.12.D., six long-term spaces are required for the 4 residential units alone. Additional long-term spaces are calculated by the end use of the commercial space, should the commercial space be used as retail; no additional long terms spaces are required. However, should the commercial space be used as an office or offices, one additional long-term bicycle parking space is required. Furthermore, should the commercial space be used as a medical office or clinic, two additional long-term bicycle parking spaces are required.

Pedestrian circulation around the building would be improved as the current site lacks pedestrian access around the existing building. Paved walkways will connect the parking area to the residential units and the rear of the commercial units, which are buffered on the Mass Ave side with an approximately 10' setback. Access to the residential units is provided directly via the rear parking area, as is access to the trash and recycling receptacle. Nine total street trees will be planted in front of the project, providing shade and improving the human scale elements of the ground floor commercial space on Mass Ave. A walkway from the front to the rear of the building that is accessible from Mass Ave will be installed. Tenants and visitors arriving to the project via Mass Ave can access the rear residential unit entrances and bicycle parking area from the front of the building. Structural engineered soils shall be used under the hardscape, and the Applicant has provided details on the types of pavers or bricks selected to ensure ADA compliance. The Board can find this condition is met.

#### 5. EDR-5 Surface Water Drainage

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas.

In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to ensure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do.

The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

The application materials state that surface water drainage will be improved via the installation of Best Management Practices elements that will reduce stormwater runoff from the site. Available Best Management Practices for the site shall be employed and include site planning to minimize impervious surface and reduce clearing and re-grading. The applicant shall maintain all the existing and proposed storm water facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site.

A stormwater infiltration analysis has been submitted and determines which areas of the site are appropriate for stormwater infiltration systems, and determines the amount of runoff the project will generate. Drainage calculations were included in the submission that indicate site stormwater run-off will be improved via the project. Final design materials must be submitted for review and approval by the Town Engineer, including a site plan that shows catch basins and filtration systems. The Board can find this condition is met.

#### 6. EDR-6 Utilities Service

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

All proposed electric, telephone, cable TV, and other such lines and equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be in accordance with all codes and local requirements. Water and sewer should be separated by ten feet and domestic protection should adhere to what the Water Division requires. The Board can find this condition is met.

#### 7. EDR-7 Advertising Features

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

Any signage and advertising will be in accordance with the provisions of Section 6.2 of the Zoning By-Law, compliant with the B3 Village Business District requirements. Final signage will need to be submitted, reviewed, and approved administratively by the Department of Planning and Community Development or reviewed by the Board for a sign permit. The Board can find that this condition is met.

#### 8. EDR-8 Special Features

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

The site plan shows an enclosed trash and recycling area located adjacent to the parking area on the rear of the property. The Board can find that this condition is met.

#### 9. EDR-9 Safety

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

The Applicant notes that the proposed building shall be designed to meet all relevant health and safety codes. Complete site and building security systems shall be incorporated into the proposed development. The safety and security of all residents, visitors, customers, and neighbors are important priorities of this project. A lighting plan has been submitted and is included in the updated architectural drawings. The Board can find this condition is met.

#### 10. EDR-10 Heritage

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

The existing building, also known as the "Atwood House," has been located on the property since at least 1911 and has deteriorated over time to the point where restoration is infeasible. The applicant sought to demolish the house in anticipation of building a new development and was placed under demolition delay by the Historical Commission, which has since expired. As it stands today, the Arlington Police have been called to the site on numerous occasions to deal with trespassers and other individuals who may have visited the site for purposes which could result in potential commission of criminal and civil offenses. The submission of this Application offers an opportunity for the Town to eliminate the safety hazard to the public due to the condition of the property. The Board can find that this condition is met.

#### 11. EDR-11 Microclimate

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air, and water resources or on noise and temperature levels of the immediate environment.

Based upon materials provided in the application, there will be no adverse impacts on air and water resources or on temperature levels of the immediate environment. The project removes eight trees while maintaining several mature trees to the rear of the site as part of the project. The addition of the street tree will reduce the heat island effect identified in this section of the Mass Ave corridor. The Board can find that this condition is met.

#### 12. EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

A LEED checklist was provided. Additionally, the applicant notes in the project narrative that the project is committed to the inclusion of the following sustainability components which are not shown on the plans:

- Sustainable exterior and interior building & site materials and products
- Building envelope compliance with the Stretch Energy Code
- Low-Emittance windows & doors
- Energy-efficient mechanical systems
- Indoor Air Quality and thermal comfort
- Energy-efficient lighting and electrical devices
- Energy Star appliances
- Cool roofs & trellis shading
- Solar-ready roof features
- Sustainable and less water-intensive landscape materials
- Non-invasive plant materials
- Site and building cooling strategies utilizing planting locations
- · Waste reduction and recycling
- Storm water management

#### IV. <u>Findings</u>

- 1. The ARB can find that the project is consistent with Environmental Design Review per Section 3.4 of the Zoning Bylaw.
- 2. The ARB can find that the landscaped areas adjacent to the parking area justify the buffer area reduction per Section 6.1.11.

#### V. <u>Conditions</u>

#### A. General

- 1. The final design, sign, exterior material, landscaping, and lighting plans shall be subject to the approval of the Arlington Redevelopment Board or administratively approved by the Department of Planning and Community Development.
- 2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.
- 3. The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions or modify these conditions as it deems appropriate in order to protect the public interest and welfare.
- 4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.
- 5. Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Article 30 of Town Bylaws.
- 6. The Applicant shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The applicant shall provide evidence that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.
- 7. Upon installation of landscaping materials and other site improvements, the Applicant shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.
- 8. All utilities serving or traversing the site (including electric, telephone, cable, and other such lines and equipment) shall be underground.
- 9. Upon the issuance of the building permit, the Applicant shall file with the Building Inspector and the Department of Community Safety the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.
- 10. Building signage shall be filed with and reviewed and approved by the Department of Planning and Community Development and Inspectional Services.



### **Town of Arlington, Massachusetts**

### **Discussion of 2025 Annual Town Meeting Warrant Articles**

Summary:

9:20 pm The Board will discuss a memo from DPCD regarding proposed warrant articles to come

before Town Meeting.

#### ATTACHMENTS:

	Туре	File Name	Description
D	Reference Material	Final_ARB_Memo_for_TM2025_Potential_Articles.pdf	DPCD Memo for TM2025 Potential Articles
D	Reference Material	ALL_Maps_for_memo.pdf	ALL Maps for DPCD memo
ם	Reference Material	ZBA_Chair_Memo _Proposed_Zoning_Articles_Draft_Language_for_2025_ATM.pdf	ZBA Chair Memo - Proposed Zoning Articles Draft Language for 2025 ATM



#### TOWN OF ARLINGTON

DEPARTMENT OF PLANNING and COMMUNITY DEVELOPMENT

TOWN HALL, 730 MASSACHUSETTS AVENUE ARLINGTON, MASSACHUSETTS 02476 TELEPHONE 781-316-3090

#### **MEMORANDUM**

To: Arlington Redevelopment Board

From: Claire Ricker, Director, Planning and Community Development

Date: January 10, 2024

RE: Potential 2025 Town Meeting Warrant Articles

The ARB at its annual retreat on December 12, 2024, identified several potential zoning amendments it would like to consider for 2025 Annual Town Meeting. The ARB requested additional information from DPCD staff in order to determine which of these amendments should be advanced to a warrant article petition and below is a summary of Staff's findings.

#### **HIGH PRIORITY**

#### **Accessory Dwelling Unit Amendments**

In August 2024, Massachusetts passed the Affordable Home Act which, among other things, established new limits to the regulation of Accessory Dwelling Units (ADU). The new legislation requires that all cities and towns allow ADUs by-right in single family zoning districts. This legislation goes into effect on February 2, 2025, and any municipal bylaws that are inconsistent with the state's law, may be unenforceable beyond this date.

Arlington has been forward thinking regarding the benefits of ADUs and at 2021 Town Meeting adopted Article 43 which permits ADUs in any residential district as an accessory use to a single-family, two-family, or duplex provided the owner or a family member occupies either the principal residence or the ADU. ADUs are also permitted in all Business Districts as an Accessory Use. As the Town already permits ADUs in all residential and business zoning districts, there are only minor changes required to comply with the state's new law. Mainly, the Town will need to eliminate the owner occupancy requirement in Section 5.10.2.C(1) and amend Section 5.10.2.B(1)d to allow, by, Special Permit, more than one ADU per lot in a single-family zoning district but the ARB should discuss whether to extend that provision to all zoning districts that permit ADUs.

Additionally, DPCD staff met with members of the ARB, ZBA, Town Council, and ISD on January 8, 2025, to discuss these amendments and whether there are additional regulations in our bylaw that create any barriers for those interested in building an ADU. Of the 10 ADUs constructed since 2021, one half were granted a Special Permit by the Zoning Board of Appeals to construct an ADU closer than 6' to the property line as required in Section 5.10.2.B(1)e). The consensus among the group is there are no safety or logistical reasons to require an ADU be setback 6' from a property line and removing this provision would reduce the number of applications that require ZBA approval and streamline the approval process.

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#### Amend or eliminate the B1 Zoning Districts

The B1 District is used inconsistently throughout Arlington and describes a use case that is overly restrictive and is no longer aligned with the needs of the community and development priorities in the Town. Staff has identified 123 parcels that are currently zoned B1 Business Neighborhood, which run mostly along Mass Ave from the Cambridge line to the Lexington Line. Attached are maps of each district which include property details and neighboring zoning districts for the ARB to review. B1 parcels represent 22% of Arlington's Business Districts. Staff recommends that B1 parcels be rezoned as B2A which would allow for taller height and increased floor area ratio, providing greater flexibility for property owners seeking to redevelop their property especially for mixed use, which mirrors the B1 zone in its combination of residential and commercial development.

## Revise and combine duplicate sections (Screenings and Buffers: Industrial and Business Districts and Parking Lots)

Based on feedback from ARB, DPCD staff will combine the duplicate sections of Sections 5.3.7 and 5.3.21 that were included by mistake during zoning bylaw recodification. Sections 5.3.7.D and 5.3.21.B are not duplicated and will be retained in the proposed changes. As part of this administrative correction, references made to dimensional standards for yards, setbacks, and screens or buffers in other parts of the bylaw should be clarified.

#### Amend Section 5.3.21.A(1) (duplicate of Section 5.3.7.A)

The ARB has indicated an interest in clarifying the standards for screens and buffers on parcels in the Business and Industrial districts that abut certain residential lots. These standards are primarily found in Sections 5.3.7 and 5.3.21 of the Bylaw. When these standards are applicable - based on the zoning for and proposed uses on the subject parcels and abutting properties - should be clarified, as well as what types of screens and buffer materials are allowed in the minimum required yard or setback. Revisions to amend the current standards may be proposed as well as clarifying language.

#### **Inland Wetland District Deletion**

DPCD staff and the Conservation Commission intend to advance this amendment to 2025 Town Meeting. The Inland Weland District Overlay is redundant to the scope and authority of the Conservation Commission and is unenforceable by the Building Inspector. While this article has the support of DPCD and the Inspectional Services departments as well as the Conservation Commission, given the failure of this warrant article at 2024 ATM, Town staff and the Chair of the Conservation Commission will ensure that past concerns are addressed in the warrant article language. Town staff and members of the Conservation Commission, including the Chair have been advised that they will need to be available to answer questions about deletion of the Inland Wetland District Overlay at Town Meeting.

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#### **Definition of lot coverage**

The ZBA proposes adding a new definition for lot coverage to the Zoning Bylaw. The proposed change would formalize ISD's standard practice to apply the definition of "Building Coverage" wherever "Lot Coverage" is used. In addition to the flexibility adding this new definition would offer for any future revisions by Town Meeting, it is simpler to have the new definition refer back to "Building Coverage" than to change all references in the Bylaw from "Lot Coverage" to "Building Coverage". See memo from Christian Klein, ZBA Chair.

#### **Parking in Residential Districts**

The ZBA proposes revisions to Section 6.1.10.A – Parking in Residential Districts to increase readability, provide new guidance on dimensional standards for required vegetated buffers for side yard driveways and proximity of driveways to intersections, and clarify the required finding in order to allow second driveways for one- to three-family dwellings in the R0, R1, R2, R3 and R4 districts. The proposed changes to the section primarily reorganize and reformat the existing text for clarity and ease of reference, while adding two new dimensional requirements: (1) a driveway cannot be closer than 20 feet to an intersection, except by Special Permit; and (2) the required vegetated buffer for side yard driveways when abutting a residential lot shall be a minimum of 2.5 feet in width, or 1.5 feet in width with a minimum height of 4 feet, except as excluded by Section 5.3.12.B – Traffic Visibility for Driveways. The amended finding as proposed requires a second driveway to provide for the safety of motorists, pedestrians, and bicyclists and preserve Protected Trees (as defined in Town Bylaws). Also proposed is a new non-exclusive list of factors focused on transportation and safety for the ZBA to consider when rendering a decision on second driveways. See memo from Christian Klein, ZBA Chair.

#### **MEDIUM PRIORITY**

#### Rezone Church properties zoned R1

Staff has identified 26 parcels that are both zoned R1 Residential Single Family and include a land use description of Church, Rectory, or Other. Attached are maps of the subject properties which include property details. Of these 26 parcels, only the properties owned by the Greek Orthodox Church at 4 Appleton Street and 0 Lot Appleton Place are within the Multi-Family Neighborhood Overlay District. There are four properties on Mass Ave that are adjacent or in near proximity to the Multi-Family Massachusetts Avenue/Broadway Multi-family Overlay District.

The average square footage of the 26 parcels is quite large at 57,100 square feet. 13 Parcels are > 20,000 square feet and 13 are < 20,000 square feet. Many of the smaller parcels are under the same ownership as the larger parcels which may indicate that sites are larger in area than as identified in the parcel list. Given the overall size of the parcels, rezoning to allow for apartment buildings and mixed uses on these sites, dependent on the size of the parcel, would allow for greater development flexibility should these properties ever change hands in the future. Staff has researched precedent for rezoning of church parcels comprehensively in neighboring communities, thus far we have found no relevant precedents but will continue to study the topic.

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#### Change Environmental Design Review Applicability for homes abutting Minuteman Bikeway

After discussions with the ZBA Chair and DPCD staff, the ARB proposes to exclude alterations to the façade in a manner that affects the architectural integrity of the structure on certain residential properties abutting the Minuteman Bikeway from environmental design review. Most of the applications that have been heard by the ARB for this reason have sought approval for dormer additions. The proposed change will have no impact on projects located on properties abutting the bikeway that are currently subject to environmental design review, and which require a building permit and special permit in accordance with use regulations for the applicable district. Section 3.4.2.A of the bylaw could be revised by adding a new sentence after the existing text stating: "This use excludes projects located on properties abutting the Minuteman Bikeway in the R1 or R2 districts with a single-family, two-family or duplex dwelling and that alter the façade in a manner that affects the architectural integrity of the structure only, as described in this section above."

#### LOW/FUTURE PRIORITY

## Extend MBTA communities to select residential properties originally excluded on Mass Ave in East Arlington

The ARB has requested the draft 7/18/2023 MBTA Communities map of residential zoned properties on Mass Ave between Lake Street and Fairmont Street for the purpose of studying the extension of the Multi-Family Overlay District along Mass Ave to extend the MBTA Communities district. These properties were originally excluded to support the future mixed use development of these properties as part of the more comprehensive development of an East Arlington Business District. Extension of the overlay would incorporate 13 additional residentially zoned parcels and allow for greater density along the easternmost Mass Ave corridor, but would create future discontinuity within the proposed business district. The intent behind some members of the ARB suggesting this change was to create pathways for future development in the near future.

The ARB shall discuss whether including the development of a proposed contiguous East Arlington Business District at the same time that it is creating a proposal for a contiguous Arlington Heights Business District with the aim of bringing both forth at 2026 Arlington Town Meeting would be a more comprehensive approach in alignment with the original goals set forth in the development of the MBTA Communities districts.

#### Explore removal of Special Permit requirement for renting of up to 3 rooms in residential districts

Staff met with Mr. Revilak and Inspectional Services Director, Mike Ciampa, to discuss Section 5.4.3 of the residential use table which requires a Special Permit in order to rent up to 3 rooms in a residential district. It is staff's position that this is a difficult bylaw to enforce and likely a more common practice than is representative of Special Permit applications received. As the cost of housing continues to increase and more residents are choosing to age in place, it would be beneficial to remove barriers to having a housemate. Accordingly, staff recommends amending the code to allow the renting of up to 3 rooms by-right.

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#### Revisit Open Space requirements comprehensively

Staff has begun working on a "green" open space project that is somewhat mirrored after those in place in Somerville and Cambridge, although in a more a limited way. Staff will continue work on this and plan to advance at 2026 Town Meeting.

#### **Open Space/Cemetery Rezoning**

DPCD staff met with the Cemetery Commission to discuss potentially rezoning cemetery parcels and the overall consensus is that they feel there is limited benefit and are concerned about unanticipated complications. They are, however, receptive to the exploration of rezoning Article 97 properties as Open Space. If the ARB agrees, staff will conduct research to understand the scope of the project which may include changes to the open space zoning definition to advance to 2026 Town Meeting. Further, the Town is in possession of several small, undevelopable vacant lots that could potentially be repurposed, for instance, as parklets.

#### Budget request for shared resource for signage and vacant storefront enforcement

Staff has been informed that the budget cycle for requesting additional personnel has passed but will coordinate with the appropriate departments to ensure a request is submitted in advance of the next budgeting cycle.

#### **Cannabis Social Consumption Establishments**

On December 5, 2024, the Massachusetts Cannabis Control Commission (MCCC) first unveiled policies for three proposed license types for future adult-use social consumption businesses that will be carved out for small businesses and licenses owned by participants of the agency's equity programming. The proposed license types include:

- Supplemental: For qualifying Marijuana Establishments, including Cultivators, Product Manufacturers, Retailers, Microbusinesses, Craft Marijuana Cooperatives or Delivery Operators. These licenses allow on-site consumption within or attached to an existing establishment, events within an existing or adjoining facility, and consumption of product purchased on site.
- Hospitality: For new or existing non-cannabis businesses to host on-site consumption events in partnership with qualifying Marijuana Establishments. Event Organizers would permit onsite social consumption at events at businesses like lounges, movie theaters, lodging facilities, and gyms.
- Event Organizer: For qualifying Marijuana Establishments to organize and host temporary consumption events with a maximum of 24 events lasting no longer than five consecutive days per year. Only existing Marijuana Establishments would qualify for temporary, on-site consumption permits during events.

The three proposed license types would be exclusively available to Social Equity Businesses, Social Equity Program Participants, Certified Economic Empowerment Priority Applicants, Microbusinesses, and Craft Marijuana Cooperatives for an initial period of 60 months, an extension of the current exclusivity period of 36 months.

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On December 17, 2024, the MCCC began its review of draft regulations governing on-site Social Consumption Establishments. An informal, public comment period is open through January 23, 202 and a vote by the MCCC is expected in early 2025.

At this time, Arlington does not have any marijuana establishments that participate in the MCCC's equity programs; therefore, it appears social consumption establishments will not be permitted in Arlington for at least 60 months. Staff will continue to monitor this and future legislation and provide updates to the Redevelopment Board accordingly.

#### **NO ACTION**

#### **Artist housing (Update: No Warrant Article Action Required)**

The Arlington Commission for Arts & Culture (ACAC) finalized the Standards and Guidelines for Artists' Mixed Use Space at their December 5, 2024 meeting. They are currently discussing the Certification Process and working through the draft. DPCD staff is drafting the example agreement for artists' housing as part of the conditions of a special permit to be used when issuing a permit by the Redevelopment Board or Zoning Board of Appeals. Once ACAC establishes an artist certification process and staff finalizes the draft agreement, it will be presented to the ARB for discussion but would not require a Town Meeting vote or change to the zoning bylaw. Additionally, staff has confirmed with Town Council that the Standards and Guidelines for Artists' Mixed Use Space is an enforceable document pursuant to the language in Section 5.6.4A and particularly once incorporated in an artist housing agreement.

#### <u>Liquor Control Laws</u>

Reevaluating alcohol regulations has been incorporated into the Select Board/Town Manager's goals for 2025. There are several changes to be made regarding the seat minimums, food requirements, and BYOB policies. As the Local Licensing Authority (LLA), the Town and Select Board can modify the Select Board's Alcohol Licenses and Regulations policy, as desired, through a favorable vote of the Select Board and does not require Town Meeting approval. DPCD staff will coordinate with the Select Board and Town Manager's office to propose alcohol regulation changes and update the ARB accordingly.

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## **B1 Zoned Properties 43-89 Mass Ave**

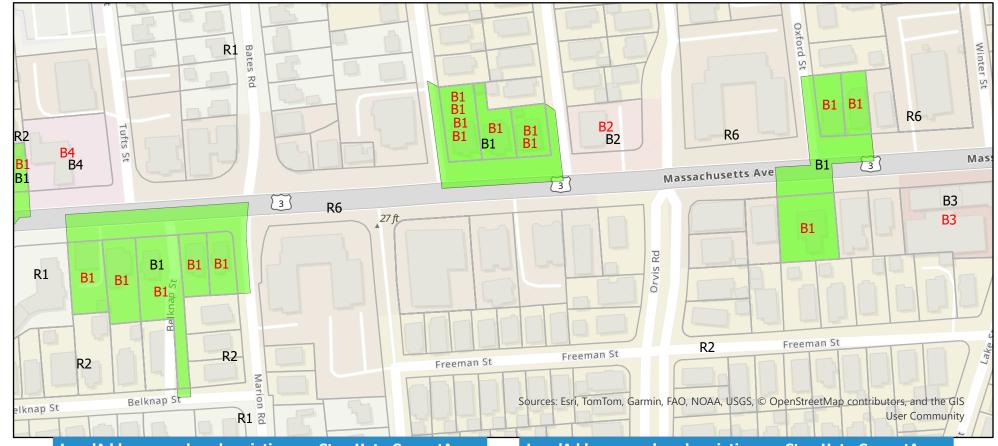


LegalAddr	luc_description	StoryHgt	CurrentAcres
58-60 MASS AVE	013 - Res. / Comm.	3	0.118
48-50 MASS AVE	104 - Two Family	2A	0.114
89 MASS AVE	340 - Office	2H	0.125
8-10 HENDERSON ST	105 - Three Fam.	3	0.123
63 MASS AVE	340 - Office	1	0.105
67 MASS AVE	104 - Two Family	2A	0.094

LegalAddr	luc_description	StoryHgt	CurrentAcres
71-73 MASS AVE	013 - Res. / Comm.	3	0.136
77 MASS AVE	109 - Multi-House	2A	0.126
43-45 MASS AVE	111 - Apts. 4-8	2H	0.121
23-5-7 MASS AVE	132 - Undev. Land		0.093
62-1-3 MASS AVE	930 - Vacant-Sel		0.019

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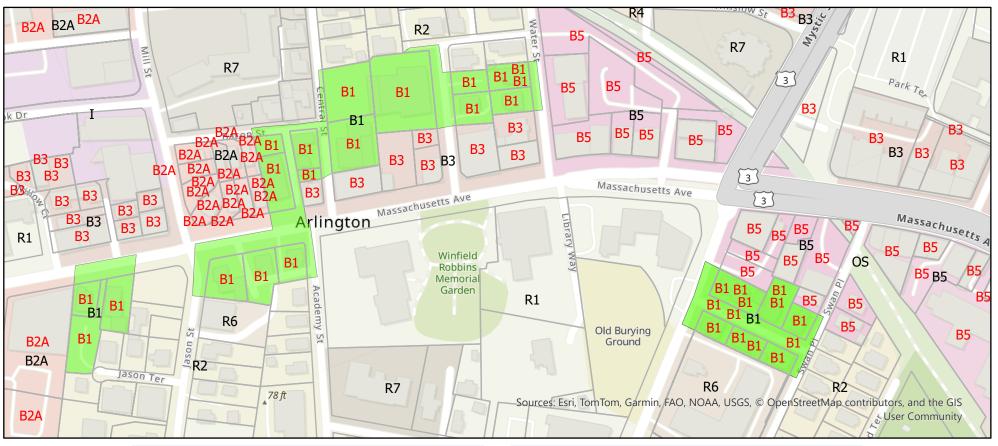
# **B1 Zoned Properties** 221-298 Mass Ave



LegalAddr	luc_description	StoryHgt	CurrentAcres
226 MASS AVE	031 - Comm. / Res.	2	0.26
294-298 MASS AVE	013 - Res. / Comm.	2	0.166
292 MASS AVE	031 - Comm. / Res.	2H	0.2
290 MASS AVE	013 - Res. / Comm.	2A	0.324
288 MASS AVE	104 - Two Family	2H	0.12
286 MASS AVE	105 - Three Fam.	2H	0.12
314 MASS AVE	109 - Multi-House	2H	0.16
310 MASS AVE	105 - Three Fam.	2T	0.169
221 MASS AVE	104 - Two Family	2A	0.123
223 MASS AVE	340 - Office	2A	0.12
305 MASS AVE	101 - One Family	2A	0.154

LegalAddr	luc_description	StoryHgt	CurrentAcres
255 MASS AVE	111 - Apts. 4-8	2A	0.143
259 MASS AVE	343 - Condo-Comm	3	0
259 MASS AVE	343 - Condo-Comm	3	0
259 MASS AVE	343 - Condo-Comm	3	0
259 MASS AVE	343 - Condo-Comm	3	0
325-327 MASS AVE	105 - Three Fam.	2A	0.111
319 MASS AVE	340 - Office	2	0.115
311 MASS AVE	101 - One Family	2	0.132
315-317 MASS AVE	104 - Two Family	2A	0.135
251 MASS AVE 199	9 ft 2 <sup>26</sup> Condo	1	0
251 MASS AVE	102 - Condo	2H	0

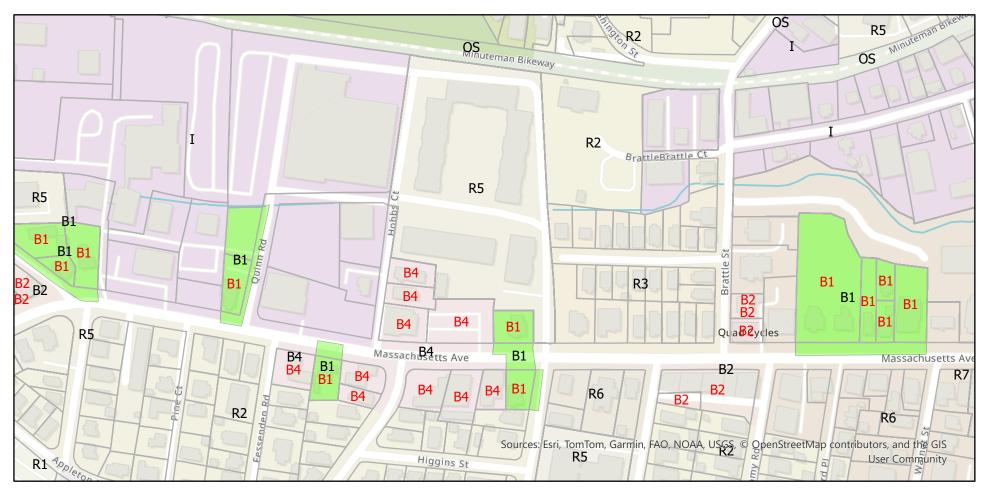
## B1 Zoned Properties 734-800 Mass Ave, Swan St, Court St



LegalAddr	luc_description	StoryHgt	CurrentAcres
16 SWAN ST	111 - Apts. 4-8	2H	0.112
7 SWAN ST	102 - Condo	2H	0
5 SWAN ST	102 - Condo	2H	0
6-8 WATER ST	105 - Three Fam.	2H	0.145
9 COURT ST	340 - Office	2A	0.18
50-6-8 COURT ST	337 - Parking Lot		0.111
51-1-3 BACON ST	962 - Other		0.076
8-10 CENTRAL ST	109 - Multi-House	2A	0.11
6 CENTRAL ST	101 - One Family	2	0.036
735 MASS AVE	960 - Church	1	0.282
7 CENTRAL ST	340 - Office	2	0.321
51-4-2 CENTRAL ST	900 - U.S. Govt.		0.35
10 COURT ST	900 - U.S. Govt.	1	0.715

LegalAddr	luc_description	StoryHgt	CurrentAcres
800 MASS AVE	031 - Comm. / Res.	2H	0.111
792 MASS AVE	340 - Office	2T	0.204
754 MASS AVE	340 - Office	2A	0.222
742 MASS AVE	031 - Comm. / Res.	2H	0.227
734-736 MASS AVE	013 - Res. / Comm.	2H	0.146
13 SWAN ST	102 - Condo	2T	0
15 SWAN ST	102 - Condo	2T	0
10 SWAN ST	102 - Condo	1	0
10 SWAN ST	102 - Condo	1A	0
12 WATER ST	102 - Condo	2A	0
12 WATER ST	102 - Condo	0	0
12 WATER ST	102 26 order 226	0	0
2 SWAN ST	102 - Condo	2A	0
4 SWAN ST	102 - Condo	2	0

## **B1 Zoned Properties 1007-1171 Mass Ave**



LegalAddr	luc_description	StoryHgt	CurrentAcres
1087-1089 MASS AVE	105 - Three Fam.	2H	0.185
5 FOREST ST	316 - Comm. Whs.	2	0.29
1171 MASS AVE	031 - Comm. / Res.	2	0.237
1173 MASS AVE	114 - Housing Corp	2A	0.084
1145 MASS AVE	355 - Funeral	2A	0.192
1122 MASS AVE	013 - Res. / Comm.	2A	0.149
1090 MASS AVE	013 - Res. / Comm.	2	<b>20.148</b> 226

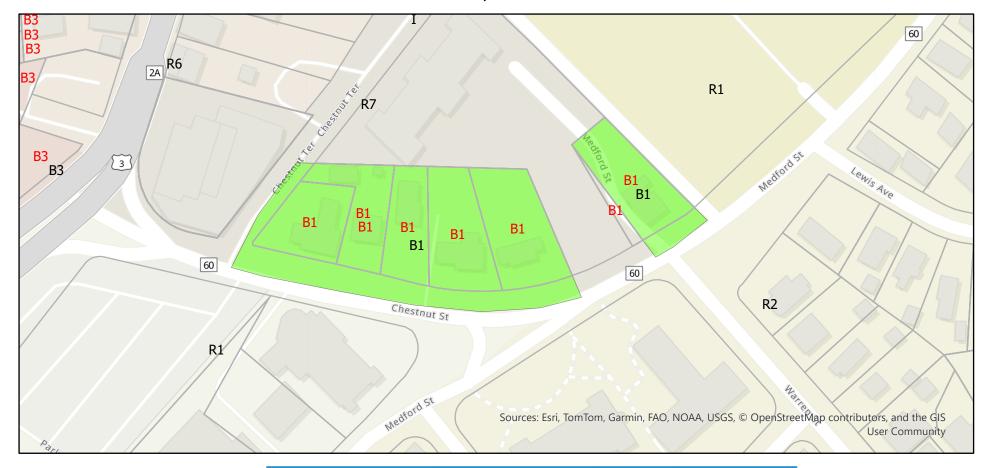
## **B1 ZONED PROPERTIES 1471-1530 MASS AVE**



LegalAddr	luc_description	StoryHgt	CurrentAcres
1471 MASS AVE	105 - Three Fam.	2A	0.055
1491-1493 MASS AVE	104 - Two Family	1	0.109
1497 MASS AVE	101 - One Family	2A	0.07
1501 MASS AVE	101 - One Family	2	0.063
1507-1511 MASS AVE	013 - Res. / Comm.	2	0.166
1513-1515 MASS AVE	104 - Two Family	2	0.095
1517-1519 MASS AVE	106 - Out Bldg.		0.1

LegalAddr	luc_description	StoryHgt	CurrentAcres
1521-1523 MASS AVE	104 - Two Family	2	0.098
1530 MASS AVE	104 - Two Family	3	0.15
1520 MASS AVE	013 - Res. / Comm.	2A	0.11
1516 MASS AVE	101 - One Family	1	0.101
1500-1502 MASS AVE	013 - Res. / Comm.	3	0.167
1508-1510 MASS AVE	326 - Restaur/Bar	1	0.032
4-6 LANCASTER RD	104 - Two Family	2	0.072

B1 Zoned Properties 1-17 Chestnut St., 58-60 Medford St.



LegalAddr	luc_description	StoryHgt	CurrentAcres
58-60 MEDFORD ST	340 - Office	2A	0.259
46-1-14 MEDFORD ST	132 - Undev. Land		0.031
17 CHESTNUT ST	013 - Res. / Comm.	2T	0.177
9 CHESTNUT ST	342 - Pro-Office	1	0.184
5 CHESTNUT ST	355 - Funeral	2T	0.273
1 CHESTNUT ST	340 - Office	2T	0.266
13-15 CHESTNUT ST	102 - Condo	2T	0
13-15 CHESTNUT ST	102 - Condo	203 of 226	0

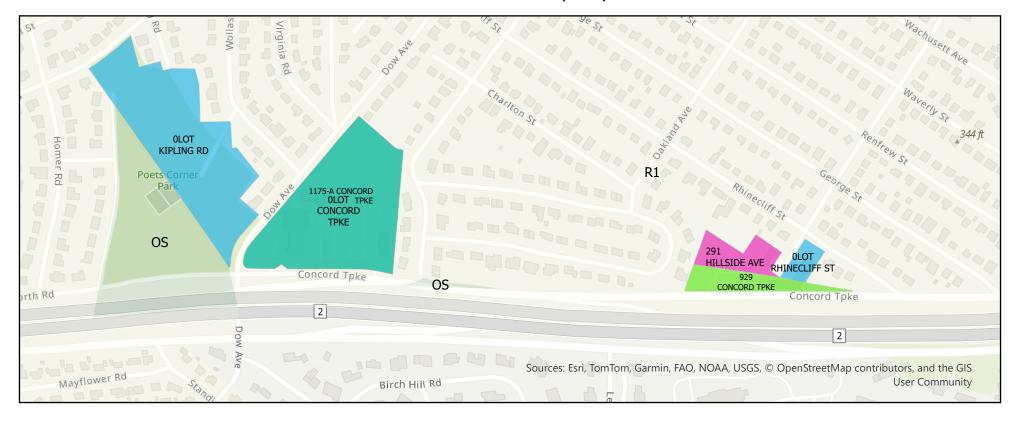
	Square	Story	Total		Building
Address	Footage	Height	Value	Owner	Туре
5 CHESTNUT ST	11,853	2T	\$ 1,176,800	TDK HOLDINGS LLC	Funeral Home
1521-1523 MASS AVE	4,808	2	\$ 758,100	GINIVISIAN GEORGE P-JANET L	Multi-Garden
418 MASS AVE	10,209	2H	\$ 1,807,800	BHATIA NEERAJ TRUSTEE	Office
7 CENTRAL ST	14,444	2	\$ 2,260,200	SAMPSON MARTHA/TRUSTEE	Office
1145 MASS AVE	8,258	2A	\$ 1,274,800	DE VITO ALFRED M TRUSTEE	Funeral Home
1025 MASS AVE	47,085	2T	\$ 1,662,400	1025 MASS AVE LLC	<null></null>
1491-1493 MASS AVE	5,484	1	\$ 774,200	VENTURA BRIGITTE	Raised Ranch
17 CHESTNUT ST	9,147	2T	\$ 1,149,300	FISCHER DAVID P	Mixed Old
OLOT MASS AVE	11,176	<null></null>	\$ 638,000	DAVIDSON MANAGEMENT	<null></null>
735 MASS AVE	9,159	1	\$ 1,795,100	HIGHROCK CHURCH INC	Church/Syn.
1013R MASS AVE	4,488	2A	\$ 703,600	CAMPBELL DIONNE M/DEVON L	Colonial
1517-1519 MASS AVE	4,679	<null></null>	\$ 386,500	IG INVESTMENTS LLC	<null></null>
390 MASS AVE	10,149	3	\$ 1,403,690	KOZELIAN JOHN & SILVA N/ TRS	Mixed Old
15 SWAN ST	4,296	2T	\$ 750,800	O`NEILL JOHN	Condo TnHs.
22 PLEASANT ST #1	8,443	2A	\$ 936,600	POTTER DIANA LIVINGSTON/ TRUSTEE	Condo Conv
40-42 PLEASANT ST #A	4,468	1	\$ 1,176,700	42 PLEASANT STREET LLC	Condo Conv
290 MASS AVE	14,285	2A	\$ 1,343,600	CAMPOBASSO PROPERTIES LLC	Mixed Old
77 MASS AVE	6,109	2A	\$ 1,005,600	TAURO WALTER J JR &DANIEL ETAL	Multi-Conver
7-9 PALMER ST	6,213	3	\$ 1,419,400	PYLE SERENA	Apts 4-8
734-736 MASS AVE	6,284	2H	\$ 1,390,600	JASON TERRACE LLC	Mixed Old
13-15 CHESTNUT ST #13	8,836	2T	\$ 960,100	SPARROW BENJAMIN JOSEPH	Condo Conv
10 SWAN ST #1	7,385	1	\$ 722,300	MEEKS SUSAN & DAVID / TRS	Condo Conv
58-60 MEDFORD ST	10,802	2A	\$ 1,137,200	58-60 MEDFORD STREET LLC	Office
310 MASS AVE #3	7,695	1	\$ -	ZARRAGA-GRANADOS GABRIELA	Condo Conv
360 MASS AVE	4,269	2A	\$ 1,257,800	MULHERN ROBERT & TINA	Mixed Old
404 MASS AVE	5,823	2T	\$ 1,127,400	DINIS CHARLES	Multi-Garden
7 SWAN ST	4,792	2H	\$ 927,900	POTTER CHARLES BENAJAH MITCHEL	Condo Conv
1171 MASS AVE	11,378	2	\$ 1,355,600	1171 MASS AVE LLC	Mixed Old
792 MASS AVE	9,075	2T	\$ 1,049,900	JASON TERRACE LLC	Office
OLOT MASS AVE	3,426	<null></null>	\$ 80,500	SHAPIRO JANE L TRUSTEE	<null></null>
311 MASS AVE	6,448	2	\$ 947,400	HART MICHAEL A/TRUSTEE	Colonial
5 SWAN ST	4,792	2H	\$ 904,900	RANBALOOCH SOMAYEH	Condo Conv
8-10 CENTRAL ST	5,917	2A	\$ 1,170,400	HEDLUND PETER/MAILE	Multi-Conver
4-6 LANCASTER RD	3,428	2	\$ 761,900	KWAN JOSEPH F	Multi-Garden
9 CHESTNUT ST	8,006	1	\$ 959,300	ARCHAMBAULT N RICHARD TR	Office - Pro
1087-1089 MASS AVE	8,031	2H	\$ 1,011,100	LANZILLOTTI PALMAR	Multi-Conver
754 MASS AVE	9,616	2A	\$ 1,591,000	754 MASS AVE LLC	Office
1530 MASS AVE	7,006	3	\$ 1,025,200	DUNDUTSANG LODEN W	Multi-Garden

	Square	Story	Total		Building
Address	Footage	Height	Value	Owner	Туре
310 MASS AVE #2	7,695	1	\$ -	PORTZ JOHN & ELISA	Condo Conv
10 COURT ST	27,686	1	\$ 2,617,600	UNITED STATES GOVERNMENT	Post Office
292 MASS AVE	8,521	2H	\$ 1,187,700	HUTCHINS PROPERTIES LLC	Funeral Home
6 WHITTEMORE ST #A	4,272	2A	\$ 953,900	DOUGHERTY CYRA PERRY	Condo Conv
1516 MASS AVE	5,080	1	\$ 659,900	RATHBUN JENNIE H	Ranch
40 PLEASANT ST #2	4,468	2A	\$ 746,800	SEGURA DANIEL	Condo Conv
63 MASS AVE	3,983	1	\$ 1,300,300	FAKHARZADEH MARYA M/TRUSTEE	Office
67 MASS AVE	3,993	2A	\$ 904,400	DIBLASI GERARD J & BRIDGET H/TRS	Multi-Garden
286 MASS AVE	5,302	2H	\$ 1,068,200	286-288 MASS-ARLINGTON LLC	Multi-Garden
355 MASS AVE	9,616	2A	\$ 1,356,900	355 MASS AVE REAL ESTATE LLC	Mixed Old
1017 MASS AVE	8,120	2A	\$ 785,000	ERCOLINI MICHAEL	Multi-Conver
4 SWAN ST #3	8,443	2	\$ 1,261,100	CLAVENNA ROBERT SCOTT	Condo Conv
89 MASS AVE	4,964	2H	\$ 1,237,700	89 MASS AVE LLC	Multi-Garden
1501 MASS AVE	2,954	2	\$ 604,000	HEALEY JAMES T & JOSEPHINE	Old Style
742 MASS AVE	9,547	2H	\$ 1,358,900	JASON TERRACE LLC	Office
1011 MASS AVE	4,695	3	\$ 861,000	HEFTER SCOTT	Multi-Conver
6-8 WATER ST	5,966	2H	\$ 1,186,000	HSU CHENG-PEI & MAGGIE W	Multi- TnHs
43-45 MASS AVE	5,258	2H	\$ 980,700	SHAPIRO JANE L TRUSTEE	Apts 4-8
0LOT MEDFORD ST	1,188	<null></null>	\$ 12,300	58-60 MEDFORD STREET LLC	<null></null>
315-317 MASS AVE	5,729	2A	\$ 1,356,700	315-317 MASS AVE LLC	Multi-Garden
12 WATER ST #2	6,272	0	\$ 520,200	TAAMALLAH SOUFIEN	Condo Conv
288 MASS AVE	5,403	2H	\$ 1,097,800	PRVITERA PHILIP J/TRUSTEE	Multi-Garden
400-402 MASS AVE	4,194	2T	\$ 1,294,600	400-402 MASS AVE LLC	Office - Pro
374 MASS AVE #3	8,715	4	\$ 694,900	LUSTIG DAVID &	Condo Conv
13 SWAN ST	4,296	2T	\$ 754,200	GILLEN MICHAEL P	Condo TnHs.
48-50 MASS AVE	4,659	2A	\$ 946,400	FAN SHUN	Multi-Garden
1122 MASS AVE	7,245	2A	\$ 986,000	DOHERTY JAMES F	Mixed Old
1500-1502 MASS AVE	7,611	3	\$ 1,228,400	1500 MASS AVE LLC	Apts 4-8
13-15 CHESTNUT ST #15	8,836	2T	\$ 950,200	TREUL ELENA VIKTOROVNA	Condo Conv
223 MASS AVE	5,200	2A	\$ 1,211,000	QUINN PATRICK J & AMY L TRS	Office
305 MASS AVE	6,673	2A	\$ 1,141,600	DESIMONE KAREN F & KATHRYN B	Office
1507-1511 MASS AVE	8,254	2	\$ 873,800	STATHOPOULOS HARALAMBOS N	Multi-Conver
1173 MASS AVE	3,998	2A	\$ 203,700	HOUSING CORPORATION OF	Multi-Garden
71-73 MASS AVE	5,551	3	\$ 1,077,300	ZAGANJORI HAKI & FERIDA TRUSTE	Multi-Garden
259 MASS AVE #4	8,207	3	\$ 402,600	CHAFFEE ONE LLC	Condo Office
374 MASS AVE #1	8,715	4	\$ 696,100	MANTY WILLIAM/TRACY YUEN	Condo Conv
OLOT CENTRAL ST	15,090	<null></null>	\$ 1,139,500	U.S. OF AMERICA POST OFFICE	<null></null>
7 AVON PL	4,040	2A	\$ 945,100	JASON TERRACE LLC	Garrison

	Square	Story	Total		Building
Address	Footage	Height	Value	Owner	Туре
374 MASS AVE #2	8,715	4	\$ 694,900	BACHANOWSKI JOHN S &	Condo Conv
294-298 MASS AVE	8,133	2	\$ 1,368,000	ROGARIS PETER J /TRUSTEE	Mixed Old
358 MASS AVE	3,949	2A	\$ 882,900	PEEL RE LLC	Mixed Old
12 WATER ST #3	6,272	0	\$ 578,200	BASSAN RANDEEP SINGH	Condo Conv
1513-1515 MASS AVE	4,059	2	\$ 752,200	IG INVESTMENTS LLC	Multi-Garden
255 MASS AVE	6,423	2A	\$ 1,141,500	LACOURT FIRMA LLC	Apts 4-8
314 MASS AVE	7,027	2H	\$ 513,000	JOVELLAS ARTHUR S/TRUSTEE	Multi-Garden
406 MASS AVE	6,002	2H	\$ 1,348,700	BOWES ROBERT E/TRUSTEE	Office
1520 MASS AVE	5,171	2A	\$ 813,800	CALIENDO ANTHONY A & ROBERT M/ TRS	Multi-Conver
319 MASS AVE	4,815	2	\$ 971,900	ARENSON DAVID L & CHRISTINE ANN	Office
1 CHESTNUT ST	13,145	2T	\$ 1,344,900	ONE CHESTNUT STREET	Office
1497 MASS AVE	3,206	2A	\$ 648,500	PANNESI DAVID J/DARIA A	Colonial
800 MASS AVE	5,097	2H	\$ 656,600	JASON TERRACE LLC	Office
259 MASS AVE #1	8,207	3	\$ 373,900	CHAFFEE ONE LLC	Condo Office
1007 MASS AVE	15,174	2	\$ 976,400	TOWN OF ARLINGTON	Fire Station
40 PLEASANT ST #1	4,468	2A	\$ 746,600	40 PLEASANT STREET UNIT 1 LLC	Condo Conv
16 SWAN ST	4,663	2H	\$ 1,062,500	STATHAKIS NICHOLASETAL	Apts 4-8
226 MASS AVE	12,103	2	\$ 1,597,200	HARMAN ALICE M & GERLAD/TRS	Office
8-10 HENDERSON ST	5,597	3	\$ 1,193,100	HENDERSON ST PROPERTIES LLC	Multi-Garden
0LOT COURT ST	4,862	<null></null>	\$ 567,300	CITIZENS BANK	<null></null>
1508-1510 MASS AVE	1,636	1	\$ 431,800	STATHOPOULOS ZOI	Restaurant
361 MASS AVE	11,342	2H	\$ 1,431,800	55 KENSINGTON LLC	Office
370 MASS AVE	9,534	2A	\$ 734,600	ARLINGTON POST NO 39	Lodge
8-10 AVON PL	7,129	2A	\$ 1,210,900	GNEWUCH CHRISTINA & SCOT C	Multi-Garden
325-327 MASS AVE	5,184	2A	\$ 1,009,500	MIGALA CAROLYN COLT/ TRUSTEE	Multi-Garden
1471 MASS AVE	2,457	2A	\$ 731,700	SUGRUE TERESA ETAL/ TRUSTEES	Multi-Conver
259 MASS AVE #2	8,207	3	\$ 553,000	CHAFFEE ONE LLC	Condo Office
1090 MASS AVE	6,450	2	\$ 1,019,700	KJT REALTY LLC	Mixed Old
251 MASS AVE #1	5,638	1	\$ 762,400	KROMER MATTHEW A & MEGAN	Condo Conv
259 MASS AVE #3	8,207	3	\$ 514,200	CHAFFEE ONE LLC	Condo Office
373-375 MASS AVE	5,036	2A	\$ 1,223,700	BICUSPID LLC	Mixed Old
310 MASS AVE #1	7,695	2T	\$ -	RUBENSTEIN WILLIAM J	Condo Conv
2 SWAN ST #2	8,443	2A	\$ 902,500	ARELLANO JERONIMO & ANUSHKA	Condo Conv
5 FOREST ST	11,178	2	\$ 925,200	NEIL J CROWLEY LLC	R/M Shop
6 CENTRAL ST	1,603	2	\$ 607,200	WAGNER CARL A/ TRUSTEE	Old Style
378 MASS AVE	8,009	3	\$ 1,995,800	CONNEELY CONTRACTING INC	Mixed Old
OLOT BACON ST	3,267	<null></null>	\$ 384,100	HIGHROCK CHURCH INC	<null></null>
10 SWAN ST #2	7,385	1A	\$ 902,600	DIVADKAR AMISHA	Condo Conv

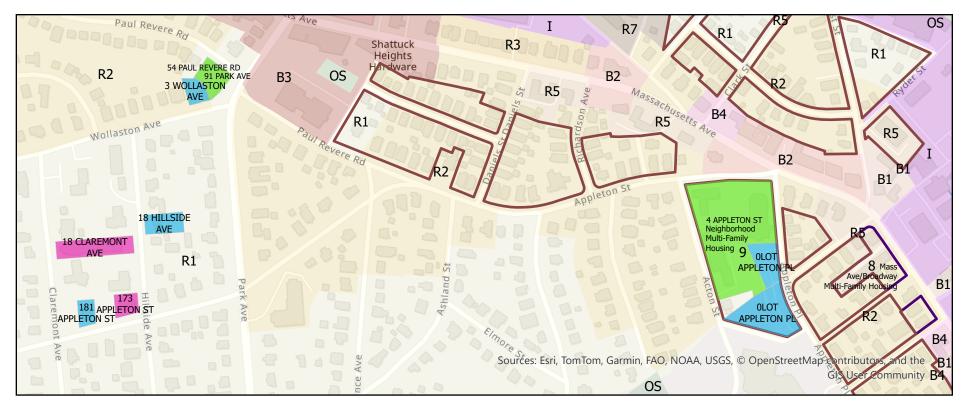
	Square	Story	Total		Building
Address	Footage	Height	Value	Owner	Туре
12 WATER ST #1	6,272	2A	\$ 564,800	DULGARIAN JEFFREY M	Condo Conv
221 MASS AVE	5,081	2A	\$ 1,091,400	DEROSAS DOLORES EILEEN	Multi-Garden
251 MASS AVE #2	5,638	2H	\$ 916,000	WYMAN DAVID G & MARYELLEN/ TRS	Condo Conv
OLOT MASS AVE	1,281	<null></null>	\$ 219,600	TOWN OF ARLINGTON-PARK	<null></null>
374 MASS AVE #4	8,715	4	\$ 697,300	THOMPSON FRED & QUINBY	Condo Conv
9 COURT ST	6,917	2A	\$ 941,000	BOBCO LLC	Office
8 WHITTEMORE ST #B	4,272	2A	\$ 828,600	BARNOON BARAK ISRAEL &	Condo Conv
10 POND LN	3,107	1T	\$ 890,200	KEEFE KATHERINE G & ROBERT	Cape

## R1 Zoned Properties with a Land Use Code of 960,961, or 962



Full Address	<b>GIS Acres</b>	<b>Landuse Description</b>
OLOT KIPLING RD	6.0427	962 - Other
291 HILLSIDE AVE	0.9117	961 - Rectory
OLOT CONCORD TPKE	6.0581	962 - Other
OLOT RHINECLIFF ST	0.3924	962 - Other
1175-A CONCORD TPKE	6.0581	960 - Church
929 CONCORD TPKE	0.9665	960 - Church

## R1 Zoned Properties with a Land Use Code of 960,961, or 962



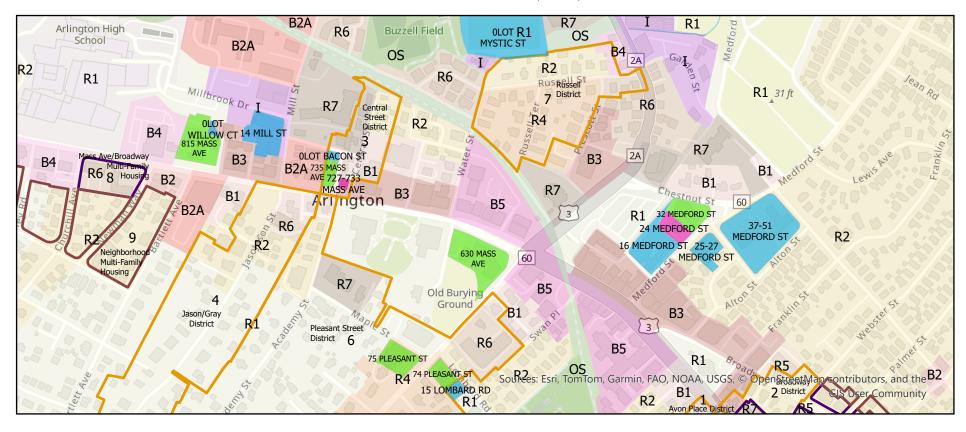
Full Address	<b>GIS Acres</b>	<b>Landuse Description</b>
OLOT APPLETON PL	0.6747	962 - Other
OLOT APPLETON PL	0.3072	962 - Other
4 APPLETON ST	2.3926	960 - Church
54 PAUL REVERE RD	0.0946	960 - Church
18 HILLSIDE AVE	0.247	962 - Other
181 APPLETON ST	0.141	962 - Other
173 APPLETON ST	0.1645	961 - Rectory
91 PARK AVE	0.1645	960 - Church
18 CLAREMONT AVE	0.4404	961 - Rectory <sub>9 of 226</sub>

# R1 Zoned Properties with a Land Use Code of 960 ,961, or 962



Full Address	<b>GIS Acres</b>	<b>Landuse Description</b>
9 WESTMINSTER AVE	0.2526	960 - Church

## R1 Zoned Properties with a Land Use Code of 960,961, or 962



Full Address	<b>GIS Acres</b>	<b>Landuse Description</b>
OLOT MYSTIC ST	3.0415	962 - Other
815 MASS AVE	0.9825	960 - Church
24 MEDFORD ST	0.352	961 - Rectory
630 MASS AVE	1.2599	960 - Church
16 MEDFORD ST	0.959	962 - Other
32 MEDFORD ST	0.5629	960 - Church

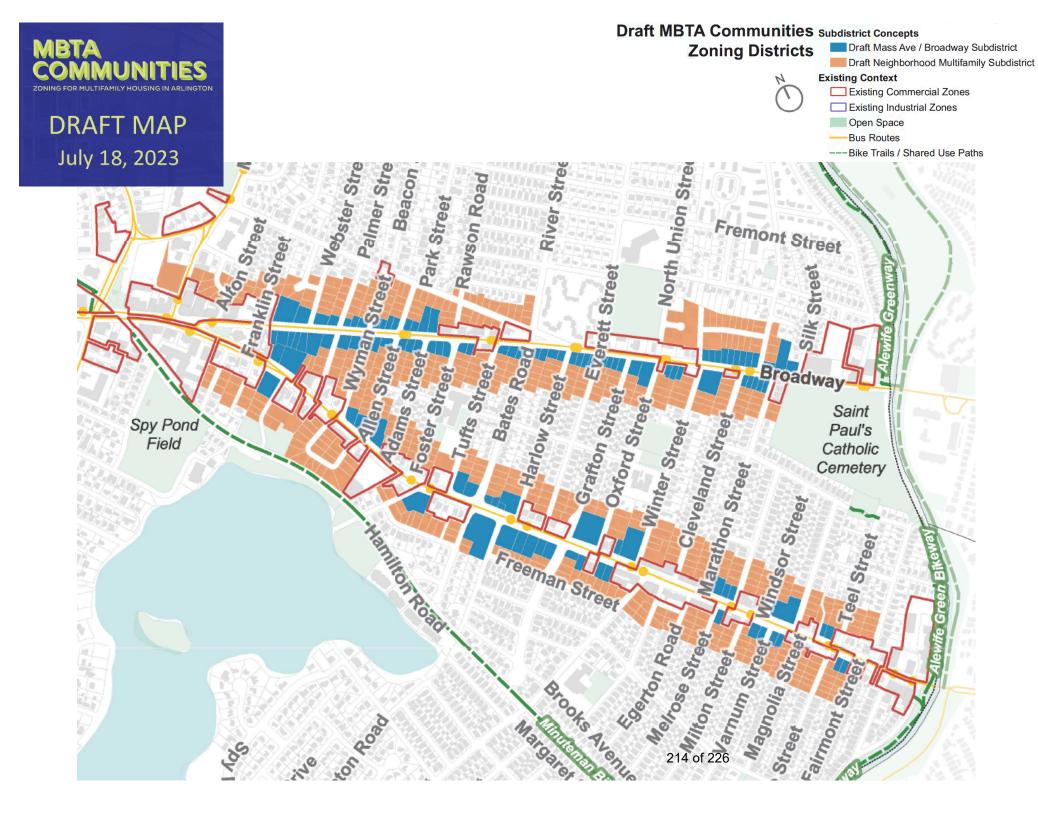
## R1 Zoned Properties with a Land Use Code of 960 ,961, or 962



Full Address	<b>GIS Acres</b>	<b>Landuse Description</b>
129 LAKE ST	0.2027	961 - Rectory
14 LINWOOD ST	0.1311	961 - Rectory
302 MASS AVE	0.5518	960 - Church
115 MASS AVE	0.7297	960 - Church

## **R1 ZONED CHURCH PROPERTIES**

Address	SqFt	Owner	Total Value
0LOT KIPLING RD	263,219	ROMAN CATHOLIC ARCH OF BOS	\$ 1,786,000
0LOT MYSTIC ST	132,488	ROMAN CATHOLIC ARCH OF BOS	\$ 4,233,400
291 HILLSIDE AVE	39,713	ST PAULS LUTHERAN CHURCH	\$ 1,910,200
129 LAKE ST	8,829	CENTER FOR JEWISH LIFE OF	\$ 1,650,500
0LOT APPLETON PL	29,392	THE GREEK ORTHODOX CHURCH	\$ 904,800
0LOT APPLETON PL	13,381	THE GREEK ORTHODOX CHURCH	\$ 666,000
815 MASS AVE	42,799	FIRST BAPTIST CHURCH	\$ 3,008,500
14 LINWOOD ST	5,710	CALVARY METH EPIS CHURCH	\$ 977,300
302 MASS AVE	24,035	CALVARY METHODIST EPISCOPAL	\$ 2,675,200
24 MEDFORD ST	15,332	ROMAN CATHOLIC ARCH OF BOS	\$ 1,803,800
0LOT CONCORD TPKE	263,890	ROMAN CATHOLIC ARCH OF BOS	\$ 12,079,400
4 APPLETON ST	104,223	THE GREEK ORTHODOX CHURCH	\$ 7,779,100
630 MASS AVE	54,879	THE FIRST CONGREGATIONAL	\$ 6,170,500
54 PAUL REVERE RD	4,123	PARK AVENUE	\$ 1,026,300
18 HILLSIDE AVE	10,759	PARK AVENUE	\$ 1,002,400
16 MEDFORD ST	41,772	ROMAN CATHOLIC ARCH OF BOS	\$ 9,438,200
181 APPLETON ST	6,142	HILLSIDE AVENUE REALTY TRUST	\$ 1,051,900
9 WESTMINSTER AVE	11,004	CHRISTIAN LIFE FELLOWSHIP	\$ 1,415,300
173 APPLETON ST	7,166	HILLSIDE AVENUE REALTY TRUST	\$ 1,208,000
0LOT RHINECLIFF ST	17,091	ST PAUL EVANGELICAL LUTHERA	\$ 725,800
115 MASS AVE	31,784	TRINITY BAPTIST CHURCH	\$ 2,916,900
91 PARK AVE	7,167	PARK AVE CONGREGATIONAL CHU	\$ 1,221,400
18 CLAREMONT AVE	19,184	ORDER OF SAINT ANNE	\$ 4,691,900
32 MEDFORD ST	24,521	ROMAN CATHOLIC ARCH OF BOS	\$ 2,161,200
1175-A CONCORD TPKE	263,890	ROMAN CATHOLIC ARCH OF BOS	\$ 3,539,800
929 CONCORD TPKE	42,101	ST PAUL EVANGELICAL LUTHERA	\$ 3,101,300



Draft Zoning Article Language January 7, 2025

Provided by the Zoning Board of Appeals for the Town of Arlington for consideration by the Arlington Redevelopment Authority

#### 1. Building Coverage v. Lot Coverage

Add Lot Coverage definition just referencing Building Coverage.

- a. Building Coverage: The building area expressed as a percentage of the total lot area.
- b. Lot Coverage: Refer to definition for Building Coverage.

Commentary: "Building Coverage" is only used in the definition of the B4: Vehicular Oriented Business District. "Lot Coverage" is used throughout the Bylaw. The Inspector of Buildings has confirmed that standard practice is to use "Building Coverage" to mean "Lot Coverage". It is simpler to add the definition for "Lot Coverage" than to change all references in the Bylaws to "Building Coverage".

#### 2. Parking in Residential Districts (6.1.10.A)

A. Parking in Residential Districts. For single-family, two-family, duplex, and three-family dwellings This section applies to all single-family, two-family, duplex, and three-family dwellings in the RO, R1, R2, R3, and R4 districts.

- (1) <u>Off-street parking spaces</u> shall not be permitted in the area between the front lot line and the minimum front setback-except on a driveway not exceeding 20 feet in width leading to the required parking space(s). In the case of a corner lot of less than 6,000 square feet, off-street parking shall be permitted in the longer of the two front yards, up to a maximum of 24 feet in width.
- (2) Off-street parking is permitted in  $(\frac{1}{2}a)$  the side yard and rear yard on a paved driveway, or in the case of a corner lot of less than 6,000 square feet, in the longer of the two front yards, up to a maximum of 24 feet in width, or  $(\frac{2}{2}b)$  in an attached or detached garage, or  $(\frac{3}{2}c)$  within the foundation of a dwelling, provided the garaging is specifically designed for that purpose.
- (3) Any driveway leading to off-street parking on a lot cannot exceed 20 feet in width.

  Further, a driveway cannot be closer than 20 feet to an intersection nor exceed a
  15% downward slope as measured from the farthest point from the front property
  line, except by Special Permit. A space designed for parking within an existing garage
  is determined to meet the requirements of an off-street parking space.
- (4) Side yards used for parking shall have a vegetated buffer when abutting a lot used for residential purposes, to minimize visual impacts. Such buffer shall be a minimum of 2.5 feet in width, or 1.5 feet in width with a minimum height of 4 feet, except as excluded by Section 5.3.12.B.

- (<u>5</u>) For single-family, two-family, duplex, and three-family dwellings in R0, R1, R2, R3 and R4 districts, not more than Only one driveway shall be permitted on a lot unless there is a finding by the Special Permit Granting Authority for the development that a second driveway or a driveway that makes more than one intersection with the street may be added in a manner that:
  - a. avoids an undue concentration of population,
  - b. allows adequate provision of transportation,
  - c. provides for the safety of motorists, pedestrian, and bicyclists,
  - d. preserves Protected Trees (as defined in Town Bylaws), and
  - e. conserves the value of land and buildings in the vicinity.

In making that finding, the Special Permit Granting Authority shall consider (among other relevant facts) functional classification and traffic volumes on the affected street or streets, whether the affected street or streets are one-way or two-way, proximity to signalized or unsignalized intersections, sight lines, potential conflicts among different roadway users (motorists, pedestrians, transit riders, bicyclists, and others), and the presence of children or others who may be unable to protect themselves from roadway dangers. In no case may a second driveway for a single-family, two-family, duplex, or three-family dwelling violate any other dimensional or density regulations for the district in which it is located. For single-family, two-family, duplex, and three-family dwellings in R0, R1, R2, R3, and R4 districts, nNot more than two driveways are permitted on a lot.

Commentary: The main goals are to 1) make the two existing paragraphs legible, 2) provide some guidance on what is meant by "vegetated buffer", and 3) provide adequate guidance for rendering a decision on second driveways.

Subsection (1) only deals with front yard parking.

Subsection (2) only deals with where parking spaces may occur.

Subsection (3) only deals with driveways. The provision regarding proximity to an intersection is new. The Town Engineer has no record of a regulation regarding the location of curb cuts in proximity to an intersection. We are proposing this be a special permit for the situations where the cross street is a paper street that has been accepted but never constructed.

Subsection (4) only deals with vegetated buffers for side yard driveways. The proposed guidance on what is adequate is new.

Subsection (5) addresses requests for a second driveway. The amendment follows a structure similar to § 5.4.2.B(6) in setting forth a finding that the SPGA is required to make and then specifying a non-exclusive list of factors to be considered in making the required finding.

The finding required in the current bylaw (avoiding undue concentration of population, allowing adequate provision of transportation, and conserving the value of land and buildings in the vicinity) is preserved. The findings are amended to include, however, safety, tree preservation, and avoidance of additional impermeable surfaces or other adverse environmental impacts.

The sentence setting forth facts to be considered is new. This is a non-exclusive list and focuses upon transportation and safety factors. These are the functional classification and traffic volumes on the affected roads and whether they are one-way or two-way (both of which are relevant to the likelihood of interference with transportation or existence of safety issues, in multi-modal situations conflicts among kinds roadway users (e.g., auto drivers and pedestrians), and the presence of children (for example, where there is a nearby school) or others whom may have additional safety requirements.

Many of these factors are considered in appropriate cases today. Stating more precisely the finding that the Zoning Board of Appeals must make and listing some of the factors that must be considered helps the Board maintain consistency in its determinations and assists applicants, abutters, and others in evaluating proposals for an extra driveway and providing useful testimony to the Board.

A "clean" version of the proposed language is provided below.

A. Parking in Residential Districts. This section applies to all single-family, two-family, duplex, and three-family dwellings in the R0, R1, R2, R3, and R4 districts.

- (1) Off-street parking spaces shall not be permitted in the area between the front lot line and the minimum front setback. In the case of a corner lot of less than 6,000 square feet, off-street parking shall be permitted in the longer of the two front yards, up to a maximum of 24 feet in width.
- (2) Off-street parking is permitted in (a) the side yard and rear yard on a paved driveway, (b) in an attached or detached garage, or (c) within the foundation of a dwelling, provided the garaging is specifically designed for that purpose.
- (3) Any driveway leading to off-street parking on a lot cannot exceed 20 feet in width. Further, a driveway cannot be closer than 20 feet to an intersection nor exceed a 15% downward slope as measured from the farthest point from the front property line, except by Special Permit.
- (4) Side yards used for parking shall have a vegetated buffer when abutting a lot used for residential purposes, to minimize visual impacts. Such buffer shall be a minimum of 2.5 feet in width, or 1.5 feet in width with a minimum height of 4 feet, except as excluded by Section 5.3.12.B.
- (5) Only one driveway shall be permitted on a lot unless there is a finding by the Special Permit Granting Authority that a second driveway or a driveway that makes more than one intersection with the street may be added in a manner that:
  - a. avoids an undue concentration of population,
  - b. allows adequate provision of transportation,

- c. provides for the safety of motorists, pedestrian, and bicyclists,
- d. preserves Protected Trees (as defined in Town Bylaws), and
- <u>e.</u> conserves the value of land and buildings in the vicinity.

In making that finding, the Special Permit Granting Authority shall consider (among other relevant facts) functional classification and traffic volumes on the affected street or streets, whether the affected street or streets are one-way or two-way, proximity to signalized or unsignalized intersections, sight lines, potential conflicts among different roadway users (motorists, pedestrians, transit riders, bicyclists, and others), and the presence of children or others who may be unable to protect themselves from roadway dangers. In no case may a second driveway violate any other dimensional or density regulations for the district in which it is located. Not more than two driveways are permitted on a lot.



## **Town of Arlington, Massachusetts**

#### Correspondence

#### Summary:

821 Mass Ave:

- W. Evans, 10/25/2024
- R. Sacks, 11/12/2024

#### Other:

- C. Wagner, 12/20/2024
- C. Heigham, 1/12/2025

#### ATTACHMENTS:

	Type	File Name	Description
ם	Correspondence	821_Mass_Ave _10252024_EvansW.pdf	821 Mass Ave - 10252024 Evans, W
D	Correspondence	821_Mass_Ave11122024_SacksR.pdf	821 Mass Ave - 11122024 Sacks, R
D	Correspondence	Other12202024_WagnerC.pdf	Other - 12202024 Wagner, C
D	Correspondence	Other01122025_HeighamC.pdf	Other - 01122025 Heigham, C

From: Wynelle Evans

To: Rachel Zsembery; Eugene Benson; Shaina Korman-Houston; Kin Lau; Stephen Revilak; Claire

Ricker

Cc: Sarah Suarez

Date: Fri 10/25/2024 3:18 PM

Re: follow-up on Monday, Oct. 21 hearings, for correspondence received

#### Dear all,

Thank you for your continued careful review of the plans for 821 Mass. Ave. I was especially glad to see attention paid to the look of the structure, and its failure to better cohere with the surroundings.

Unfortunately, this and other projects recently before the Board give the appearance of standalone design, imposed on a neighborhood without thought for what is around them. They also happen to be almost entirely interchangeable, to my eye and that of many people I've talked to. (See images at bottom of message.) Maybe one isn't so bad, but with redevelopment ramping up due to re-zoning, we are headed toward a town made up of long stretches of this stuff along our main corridors.

This is a style of architecture I've heard referred to as generica, lowest common denominator, a blandemic, etc. It not only adds nothing of visual interest to our town, it also has other negative impacts in terms of our experiential engagement with our community, and our environment, as materials are not meant to last. See this piece for a look at these and other aspects of much contemporary design:

https://www.wired.com/story/modern-architecture-starving-public-stimulation-thomas-heatherwick-cities-design-wired-health/

I'm a firm believer that good design reduces community opposition to redevelopment, and obviously can both blend with and enhance its surroundings. Arlington is full of standout examples of traditional architecture, and there's great charm and appeal to our varied neighborhoods. New buildings don't have to slavishly mimic these older styles, but they should acknowledge them. An example I use often is at 45 Coolidge Rd. It's contemporary in style, but the roof line echoes the older houses around it, and it fits well into the streetscape.





New construction <u>can</u> be a plus!

I hope the Board will continue to urge developers to aim higher. Arlington deserves much better than many of the recent proposals that have come before us.

Thank you, Wynelle

Wynelle Evans TMM, Pct. 14 781.859.9291 cell evco7@rcn.com

#### 821 Mass Ave, mixed use





1513-1519 Mass Ave, mixed use



### 5-7 Belknap St, residential



From: Rebecca Sacks

**Sent:** Tuesday, November 12, 2024 13:55

To: Rachel Zsembery; Stephen Revilak; Kin Lau; Shaina Korman-Houston; Eugene Benson; Claire

Ricker

Subject: Please vote to save the Centennial Pine

Dear ARB members,

I'm a resident of Arlington, and I urge you to require the developer to modify their plan and preserve the Centennial Pine tree.

Massachusetts Ave is already a heat island area with many mature trees gone due to development or age. With temperatures climbing up and up every year, our best line of defense is preservation of trees that provide priceless benefits - cooling, water absorption, clean air and many more!

Thank you, Rebecca Sacks From: C Wagner

Sent: Friday, December 20, 2024 12:15

**To:** Jim Feeney; Lenard Diggins; Stephen DeCourcey; Diane Mahon; John Hurd; Eric Helmuth **Cc:** Claire Ricker; Ashley Maher; Rachel Zsembery; Stephen Revilak; Kin Lau; Shaina Korman-

Houston; Eugene Benson; Michael Ruderman; Media ACMi

Subject: Needed for the ARB and Arlington: a better PA system and hybrid meetings; thank you to

ACMI and the board

Dear Manager Feeney and respected members of our elected Select Board:

For too long, the redevelopment board (The ARB)'s meetings have been conducted without adequate public address audio for those and without adequate inclusionary hybrid meeting structure for Arlington's residents and businesses. Thankfully, we do have ACMI recording most ARB meetings.

In this recording, you can hear the board members only because of a table microphone for the officials. The public cannot be adequately heard on the tape. Attendees in the meetings, even members of the public in the first row of seats sometimes struggle to hear the board members and the other members of the public, because there are no microphones connected to speakers in the room.

#### https://youtu.be/9t\_mZ\_l7lgI?t=2359

Additionally, meetings of the ARB cover issues that will have the largest ongoing impacts on town residents and businesses - such as the MBTA density overlay and a proposed affordable housing overlay. It is also essential that members of the public who cannot attend ARB meetings in person be able to participate in "hybrid" meetings, such as your Select Board body has carried out for a long time.

I urge you to make changes so that the ARB will immediately have better audio for recordings and for those in-person as well as immediately implement hybrid inclusionary meetings so that the public who cannot attend in person may listen and comment. At the recent meeting, Board members of the ARB and members of the public encouraged me to write to you. I have repeatedly urged the ARB to begin hybrid meetings and to improve the audio, so I hope my time reaching out to you is useful for the ARB and the residents of Arlington.

I wish to underline and express my appreciation for the work that ACMI and its staff and volunteers do, as well as the volunteers who are the ARB's board members. The recordings of these meetings allow Arlington to have transparency and responsibility to our residents and businesses and to best govern ourselves.

Thank you,

Carl Wagner Town Meeting - Precinct 15 Edgehill Road From: Christopher Heigham

**Sent:** Sunday, January 12, 2025 11:59

To: Rachel Zsembery; Eugene Benson; Kin Lau; Stephen Revilak; Shaina Korman-Houston

Cc: Claire Ricker

**Subject:** ADU setbacks

Members of the ARB -

I see the DCPD is advocating that "there are no safety or logistical reasons to require an ADU be setback 6' from a property line."

Those of you who were involved in 2021 may recall that I submitted an amendment (which the ARB opposed) to adjust the 6' setback to 10'. This modest change would have preserved setbacks for new ADU residences:

https://www.arlingtonma.gov/home/showdocument?id=56212&t=637556297199769797

Please familiarize yourself with the case of 106R Mt. Vernon, in which an ADU was erected 6.1' from the property line. There was a neighborhood row over the project. Two of the three abutters opposed it, going so far as to retain counsel:

https://arlington.novusagenda.com/agendapublic/DisplayAgendaPDF.ashx?MinutesMeetingID=1328 https://arlington.novusagenda.com/agendapublic/DisplayAgendaPDF.ashx?MinutesMeetingID=1321 https://arlington.novusagenda.com/agendapublic/DisplayAgendaPDF.ashx?MinutesMeetingID=1369

This is the situation that my amendment sought to avoid, and it came up in the first handful of ADUs.

Please do NOT eliminate ADU setbacks entirely, which is a radical change that will cause even more conflicts between neighbors.

Respectfully,

Topher Heigham, TMM P15